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ABSTRACT

The study investigated the extent of teacher stress and burnout reported by 200 certified teachers from four midwestern states and analyzed factors relating to differences in perceived stress by regular and special educators. Interview responses were analyzed according to demographic data and eight scales developed for the study: Stress Prone Personality Inventory, Life Experience Stress Level, Internal Coping Skills, External Supports, Perception of Stressors, Psychological Symptoms, Physiological Symptoms, and Reactions to Stress. Results are reported according to 18 research questions. Findings revealed no major difference between regular and special education teachers in terms of teacher stress (stress-prone personality, recent personal stressors, internal coping skills, support within the environment, perception of work-related stressors, level of psychological symptoms of stress, level of physiological symptoms of stress, type of reactions to stress utilized, rate of absenteeism, intention to leave the profession, willingness to re-enter the field, and rate of burnout). In addition, both groups reported experiencing the same stressors and assigned nearly the same stress level to the identified stressors. Most frequently reported stressors for the entire group were lack of administrator support, working with other teachers, and discipline and behavior problems. Ss at or approaching burnout were more vulnerable to stress-related problems, more externally controlled, less likely to make use of support groups, more apt to find teaching extremely stressful, more afflicted with both psychological and physiological symptoms of stress, and more prone to react negatively under stress. (CL)

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PROJECT TITLE

VARIABLES ASSOCIATED WITH STRSS AND BURNOUT OF REGULAR AND SPECIAL EDUCATION TEACHERS

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The University of Kansas
Department of Special Education

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CHAPTER I

INTRODUCTION

The 1980's have been called a decade of change, a time of uncertainty. Like society, the teaching profession is undergoing profound change as evidenced in the following: minimum competency examinations, teacher union conflicts, widespread layoffs, deteriorating working conditions, violence, and general disrespect for educators. At the classroom level, demands on teachers seem to be greater and more complex than ever before --computers in the classroom, foreign-speaking students, principals as instructional leaders, children from single-parent families, and finally a recent additional stressor, handicapped children mainstreamed into the regular classroom. As a result of such major changes and demands, teachers are reporting to be highly stressed.

Stress has been called "the most critical issue in teaching. When stress is properly managed, teaching can be a joy, when improperly managed, stress can be fatal" (Long & Williams, 1982, p. 120). A significant number of teachers are experiencing psychological and physiological symptoms of stress. Over 56 percent of 22,000 Chicago teachers who responded to a stress survey reported physical and/or mental illness as a direct result of their jobs (Walsh, 1979). Ninety-three percent of the 1,282 readers who responded to a survey in Learning magazine reported having experienced "feelings of burnout"; 24 percent felt "that it (teaching) was no longer worth the effort and were planning to leave teaching because of burnout" ("Readers' Report on the Tragedy of Burnout", 1979, p. 76-77).

As further evidence of the seriousness of stress and burnout, the Tacoma Association of Classroom Teachers (TACT) became the first teacher group to win stress insurance for its members ("Tacoma's Stress Insurance Plan", 1979). Teachers feeling emotionally exhausted due to prolonged stressful conditions are reporting to be burned out.

As a consequence of such feelings of stress and burnout, an increasing number of teachers are abandoning their careers. Thus, the National Education Association (NEA) reported that teachers are leaving the profession earlier than used to be the case. "In 1961 28 percent of the teachers had twenty or more years' experience. By 1976, the figure was down to 14 percent" (Spaniol, 1979, p. 57). Truch (1980) estimated that over 25 percent of the members of the teaching profession find their jobs so stressful that they are likely to leave the field.

Furthermore, many of those who continue to teach would rather be doing something else. Those burned-out teachers who remain often develop a cynical and dehumanized perception of students accompanied by a deterioration in the quality of their teaching (Walsh, 1979). Many of these teachers plan to discontinue teaching, if and when they have the opportunity. Four out of 10 teachers surveyed reported that they plan to quit before retirement ("Help Teacher Can't Teach!", 1980). Since 1956, NEA has systematically surveyed elementary and secondary public school teachers every five years regarding a variety of educational subjects. According to a recent article in Education Week, more than one in three of the teachers surveyed in 1981 said they "certainly" or "probably" would not become teachers again if given the chance (Toch, 1982). In comparison, less than one in five of the teachers sampled in 1976 responded similarly, and only about one in 10 in 1961. Consequently, many of the best and

brightest teachers are leaving their profession, while others suffer in silence.

The situation looks even more grim when student enrollment trends are considered. "The number of births has begun to rise, and by the end of the decade America faces the prospect of steadily increasing enrollments combined with a precipitous drop in the number of competent teachers available" (Benderson, 1982, p. 13). Frederick McDonald, a research scientist for Educational Testing Service (ETS), predicted a shortage of qualified educators in the near future. "The present teaching force will start retiring in large numbers in about five years. They're between the ages of 35 and 65 now. Most of the younger ones got wiped out in the recessions of the last decade" (Benderson, 1982, p. 13).

Together with the difficulty of recruiting highly qualified teachers these conditions compound the dilemma facing the educational system. Looking beyond the public schools, teacher training programs have been charged with attracting and later graduating mediocre, unimaginative men and women. Similarly, colleges of education have been called "anti-intellectual" (Atkin, 1981). Furthermore, they have been accused of stressing method over subject matter (Mitchell, 1981) and failing to provide sufficient pedagogical training (Gore, 1981). In calling the teacher a "favorite American scapegoat", Benderson (1982) quoted American folk wisdom: "Those who can, do. Those who can't, teach. Those who can't teach, teach teachers" (p. 1).

> Teacher-preparation programs have devoted so much attention to helping prospective teachers learn academic skills and effective teaching methods that little time has been left for addressing the personal development of teachers. Teachers, in

turn, have been reluctant to seek information about their own adjustment for fear of inviting criticism about being maladjusted or unfit for teaching (Long & Williams, 1982, p. 120).

While stress levels in education are high, teacher status and salary remain low. The American public have perpetuated the concept of teaching as a second-rate profession. The Eleventh Annual Gallup Poll of the Public's Attitudes Toward the Public Schools as reported in Phi Delta Kappan ("Tacoma's Stress Insurance Plan", 1979) reflected a drop in the public's rating of schools since 1978. For example, half of the parents surveyed attributed decreases in assigned school work to teachers' laziness and lack of interest. NEA's Director of Instruction and Professional Development summed up Americans' attitude toward teachers when she said, "Americans value education, but they have never valued teachers" (Benderson, 1982, p. 1).

Although teacher salaries increased 29.9 percent between 1976 and 1980, they have not kept up with the 34.9 percent rise in the Consumer Price Index. Consequently, "even many skilled and devoted teachers are saying that the professsional and financial rewards don't begin to balance the frustrations they face every day on the job" (Fooner, 1981, p. 13).

Low teaching salaries have often been attributed to the high incidence of women in the profession whose salary represents a second family income. However, during the past decade many bright women entered into more prestigious fields offering much higher salaries. It seems that rival career options and increasing teacher role dissatisfaction will influence the quality of education (Wangberg, Metzger, & Levitov, 1982).

According to the executive director of the National Council for the Accreditation of Teacher Education (NCATE), "We can no longer exploit talented women by keeping them in the classroom because they can't go anywhere else. Competent women are going to get out" (Benderson, 1982, p. 5).

Quoting Ernest Boyer, president of the Carnegie Foundation for the Advancement of Teaching, Benderson (1982) summarized the seriousness of the situation as follows:

> Today despite tight economic conditions, teachers are resigning and the ablest teachers are leaving first. Between 1962 and 1976, the percentage of public school teachers with 20 or more years of experience was cut in half. One study of 437 Wisconsin high school graduates who became teachers revealed that 40 percent had left teaching after five years. Based on ability grouping, 72.97 percent of the low-ability students were still in teaching compared to only 59 percent of the most able students.
>
> If public support continues to decline and if teaching standards continue to go down, the intellectual and economic future of this nation will be threatened (p. 14-15).

To avoid the high cost of an inadequate educational system in the future, Americans must begin to place a higher priority on education and thereby the personal well-being and professional training of their teachers. A depressed or anxious teacher or one who is frequently absent disrupts the learning process (Harlin & Jerrick, 1976). Ultimately, stress and burnout affect children.

While stress and burnout touch all levels of the educational system, they have been said to be especially prevalent among teachers of exceptional children (Weiskopf, 1980). With the passage in 1975 of Public Law 94-142 (P.L. 94-142), the Education of All Handicapped Children Act, handicapped students have been guaranteed a free, appropriate education. However, the appropriateness of their education is determined by several factors. Certainly, a critical factor is the professional quality and emotional well-being of the special education teacher commissioned to design and deliver such instruction. Not only must the teacher provide for students' instructional needs, but also for their social and emotional needs.

To effectively meet this charge is becoming increasingly difficult for special educators whose stressors may be even greater than those of regular education teachers (Tompkins, 1980). Thus, current literature suggests that special education teachers are suffering the harmful effects of stress and teacher burnout--an inconspicuous barrier to the education of the handicapped.

Rationale

To date, empirically based research regarding teacher stress and burnout is limited. Thus, study is necessary to document its incidence and impact upon both regular and special education teachers (Weiskopf, 1980). "While prognosis is that stress levels will increase, research efforts have failed to clarify those factors which teachers find stressful, or to deal with stress-reducing mechanisms within schools" (Tompkins, 1980, p. 7).

The present study was undertaken to investigate the concept of stress as it relates to teachers. Because the current literature on the

high stress levels inherent in teaching often suggests an even higher stress level among special education teachers, a major research component was devoted to a comparison between special education teachers' self-reported data and those of regular education teachers.

Purpose

The purpose of the study was (a) to investigate the extent of teacher stress and burnout in one geographic region--the midwest--as measured by a Stress and Burnout Questionnaire developed for the study and (b) to identify and analyze the variables associated with stress and burnout for regular and special education teachers. The following 18 research questions were examined:

1. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Stress Prone Personality Inventory, and when the two teacher groups are categorized by:
   - 1.1 sex
   - 1.2 age
   - 1.3 type of school district
   - 1.4 educational training level
   - 1.5 years of teaching experience
2. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Life Experience Stress Level scale, and when the two groups are categorized by:
   - 2.1 sex
   - 2.2 age
   - 2.3 type of school district

2.4 educational training level

2.5 years of teaching experience

3. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Internal Coping Skills scale, and when the two groups are categorized by:

3.1 sex

3.2 age

3.3 type of school district

3.4 educational training level

3.5 years of teaching experience

4. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the External Supports scale, and when the two groups are categorized by:

4.1 sex

4.2 age

4.3 type of school district

4.4 educational training level

4.5 years of teaching experience

5. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Perception of Stressors scale, and when the two are categorized by:

5.1 sex

5.2 age

5.3 type of school district

5.4 educational training level

5.5 years of teaching experience

6. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Psychological Symptoms scale, and when the two groups are categorized by:

6.1 sex

6.2 age

6.3 type of school district

6.4 educational training level

6.5 years of teaching experience

7. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Physiological Symptoms scale, and when the two groups are categorized by:

7.1 sex

7.2 age

7.3 type of school district

7.4 educational training level

7.5 years of teaching experience

8. Are there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Reactions to Stress scale, and when the two groups are categorized by:

8.1 sex

8.2 age

8.3 type of school district

8.4 educational training level

8.5 years of teaching experience

9. Are there statistically significant differences between the mean absence rate of special education teachers and that of regular education teachers on the basis of self-reported data?

10. Are there statistically significant differences between the stress-related behaviors (as measured by the questions listed below) of regular education teachers and special education teachers?

10.1 Do you call in sick occasionally due to stress?

10.2 Do you plan to teach until retirement?

10.3 Do you plan to stay in the field of education?

10.4 Would you encourage your son or daughter to begin a career in education?

10.5 Knowing what you know now, if you had a second chance, would you re-enter the teaching field?

10.6 According to the following definition, do you consider yourself burned out?

"Emotional exhaustion resulting from the stress of interpersonal contact? (including low morale, high absenteeism, and loss of positive feelings, sympathy, and respect for students) (Maslach, 1978, p. 56).

11. What are the most frequently reported work-related stressors for the sample of teachers considered collectively and by teaching area--regular education or special education?

12. Is there a difference between the professional, work-related stressors perceived as most stressful by regular and by special education teachers on the Perception of Stressors scale?

13. Do teachers who report to "call in sick occasionally due to stress" experience a higher (statistically significant) level of psychological and physiological symptoms of stress than teachers who do not?

14. Do the group of teachers reporting to be burned out or "getting there", according to the Maslach (1978) definition of burnout, differ statistically from those who report not to be burned out? Do they differ on the following variables:

    14.1 age

    14.2 total years of experience

    14.3 Stress Prone Personality Inventory

    14.4 Life Experience Stress Level scale

    14.5 Internal Coping Skills scale

    14.6 External Supports scale

    14.7 Perception of Stressors scale

    14.8 Psychological Symptoms scale

    14.9 Physiological Symptoms scale

    14.10 Reactions to Stress scale

15. Do certain demographic variables (A) or performance scores on individual scales (B) (listed below) contribute significantly to a prediction of those teachers who report either being burned out or "getting there"?

    (A) Demographic variables

1. age
2. sex
3. total number of days absent
4. total number of years of teaching experience

(B) Individual scale scores

1. Stress Prone Personality Inventory
2. Life Experience Stress Level
3. Internal Coping Skills
4. External Supports
5. Perception of Stressors
6. Psychological Symptoms
7. Physiological Symptoms
8. Reactions to Stress

16. What do those teachers who do not plan to teach until retirement report that they hope to be doing (a) next year and (b) in three years?
17. What reasons do teachers most frequently give for continuing to teach in spite of reported feelings of being burned out or "getting there"?
18. What proportion of female teachers report that cooking, housekeeping, and childcare duties in addition to full-time teaching are a source of stress?

Considering the effect that stress and burnout has on teacher health, job satisfaction, absenteeism, and attrition, this study is warranted by providing useful data on the variables associated with stress and burnout in education.

CHAPTER II

REVIEW OF THE LITERATURE

The literature related to the study of stress among teachers has been divided into the following four major sections: (a) the concept of stress, (b) occupational stress, (c) stress in education, (d) stress in special education, and (e) the burnout syndrome. The present literature review does not deal with the biological or psychological origins of stress. Rather it was designed to analyze and clarify a personnel problem that has become a major concern to educators.

The Concept of Stress

The construct of stress, which is not a strictly modern phenomenon, was originally associated with the physical sciences. Gradually, however, the concept has been adapted to the social and physical sciences as well. Over the years, the term stress has been used widely and often indiscriminately. Most recently stress and stress reduction have become commercialized as evidenced by a deluge of books, articles, and conferences on the topic.

Definition

In general terms, stress is described as a force exerted on a system or an individual that in some way alters the make-up of that system or individual. Thus, in the social and psychological sciences, stress is measured in terms of an individual's reaction to it.

As with any intricate phenomenon, the study of stress is plagued by definitional problems. Thus, Monat and Lazarus (1977) not only described existing attempts at defining stress as confusing, but expressed doubt that the confusion regarding terminology would subside:

> The disenchantment felt by many scientists with the stress field is certainly understandable when one views two decades in which the term "stress" has been used variously to refer to "stimulus" by some workers, "response" by some workers, "interaction" by some others, and more comprehensive combinations of the above factors by still other workers. (p. 2)

In an attempt to reduce the confusion surrounding stress terminology, it is important to differentiate among three phenomena--stress, stressor, and a person's reaction to stress. Swogger (1981) distinguished between a "stressor" and "stress." He defined a stressor as "any stimulus, internal or external, which activates our psychological and physiological coping mechanisms," while stress was defined as "the result of unsuccessful coping" (p. 30). Stressors and stress are a natural part of life. Perception of the environment, personality, and psychological make-up determine whether or not a stressor will be potentially dangerous. Shaw, Bensky, and Dixon (1981) differentiated between "stressors" and "stress reactions." Stressors create stress reactions and "can be defined in three broad categories: environmental, physical, and psychological ... Broadly defined, the stress reaction can be viewed as a mental, physical, and emotional response to environmental (school) and personal demands" (p. 1).

To further organize current definitions of the concept of stress, Long and Williams (1982) identified three areas: (a) demanding environmental events, (b) physiological responses to environmental demands, and (c) psychological responses to environmental demands.

Environmental events. Types of stress subsumed under this category relate to events outside the person which create extraordinary burdens or pressures. The events themselves are considered to be the stress-effecting strain on the person. The definition of stress as caused by external events presents the following problems. First, the stressful nature of an environmental stimulus is relative to an individual's personal make-up. Thus, a stressor considered negative by some may be considered a challenge to others. Second, the stressful nature of an environmental stimulus is somewhat dependent on time. What is stressful today may not be felt as such tomorrow. Third, such conceptualizations of stress may condone the tendency to blame problems on the environment rather than trying to respond more appropriately to the demands of life. Nevertheless, definitions of stress which focus on demanding environmental events may help identify situations which might cause health problems, and encourage the development of strategies for avoiding or coping with potential stressors.

Physiological responses. Stress has also been defined in terms of bodily reactions to environmental demands. That is, the response is the "stress," while the environmental demand is the "stressor."

One of the earliest definitions of this type was proposed by Selye (1974) who defined stress as "the nonspecific response of the body to any demand made upon it" (p. 27). He described a pattern of physiological responses which are nonspecific (stereotyped responses) and common to all types of exposure. The stimulants of cold, heat, drugs, hormones, sorrow, and joy may all cause an identical biochemical reaction in the body. Selye referred to such behavior as the general adaptation syndrome whereby the individual is alerted for fight-or-flight behavior under conditions of stress.

Not all stress is bad. Some individuals thrive on stress and a fast-paced life, while others suffer from an insufficient stress level (hypostress) in their lives. Stress should signal the need to initiate coping responses. Whether an individual successfully adapts to stress or succumbs to it depends on his/her tolerance level and the intensity and duration of the stressor. Selye encouraged people to convert negative stress (distress) into positive stress (eustress) by adopting a different attitude toward life events. In their discussion of how individuals appraise potentially stressful events, Baum, Singer, and Baum (1981) pointed out that those who perceive stress as challenging are likely to believe that the stressor can be dealt with effectively.

> It is likely that people predisposed to view stressors as a challenge, i.e., those who have great confidence in their ability to adapt to disruptive events, will cope differently than people tending to view events as more threatening. These differences are no doubt linked to self-esteem, motivational states, and other processes, and, if stable, offer potentially useful tools in understanding what makes people more or less vulnerable to stress. (p. 9)

Another definition, focusing on physiological responses, was suggested by DeShong (1981) who defined stress as "a physiological experience affecting you in physical, emotional, social, intellectual, and spiritual ways" (p. 6).

Psychological responses. Sometimes stress is used synonymously with terms like anxiety or fear used to describe psychological processes or the way in which people feel about a particular situation. Stress may be used to describe a general uneasy feeling which cannot be traced to

any particular source. Conditions such as queasiness of the stomach and muscle tightening are often associated with feelings of stress.

Long and Williams' (1982) definition reflected this focus by stating that stress is "any physical, behavioral, or psychological response to real or perceived demands (stressors) placed on an individual (p. 125).

Brodsky (1977), a physician who has examined numerous persons who claimed physical and psychological injury as a result of stress, suggested the following definition of stress.

> Long-term stress involves awareness--the antithesis of smooth, automatic function. Stress is the awareness of awareness, the recognition that one is not functioning automatically, together with the suspense and anxiety that accompany this state. It is the fear that one will never again experience that peace of automatic function. It is the awareness of threat from the outside or turbulence within that was formerly not present. It is anger at those who have caused this pain. (Brodsky, 1977, p. 123)

Due to the diversity of meanings of stress and the accompanying conceptual frameworks, Lazarus (1966) suggested that stress be used as a generic term.

> It seems wise to use "stress" as a generic term for the whole area of problems that includes the stimuli producing stress reactions, the reactions themselves, and the various intervening processes. Thus, we speak of the field of stress, and mean the physiological, sociological, and psychological phenomena and their respective concepts... Stress is not any one of these things; nor is it stimulus, response, or intervening

variables, but rather a collective term for an area of study. (p. 27)

Several years after proposing the above definition, Lazarus expressed a more specific definition during an interview with Coleman (1979): "Stress is what occurs when the demands of the environment, in the person's eyes, clearly exceed the resources of the person to handle them. Foremost among those resources is how the person construes the situation: does he or she judge it as threatening, or as a challenge" (p. 52)?

A similar definition was proposed by McGrath (1976), who suggested that there is potential for stress when a person perceives a situation as presenting a demand which threatens to exceed his/her capabilities and resources for meeting it. Similarly, Woolfolk and Richardson (1978) emphasized that it is the person's perception of the demand as being threatening that is critical in determining stress.

Along the same lines, Skinner (1980) defined stress as an unavoidable friction, a natural component of daily living, that results from interaction with the environment. The absence of stress means death. Most individuals cope quite efficiently with daily stress until its intensity exceeds their coping resources.

In some instances, the inability to adapt to increasing demands may have debilitating results. Thus, there is evidence to suggest a relationship between undue stress and the onset of major health problems (Pelletier, 1977).

Labeling stress the "spice of life," Ross (1980) stated that a well-adjusted person has the ability to accept normal stress and to enjoy it. In his emphasis on the positive nature of stress, Ross defined

it as the "healthy condition of mental and physical readiness in any living organism when it faces a crisis or when it must act in a productive or creative manner" (p. 62).

Thus, the attempts at defining the elusive concept of stress continue. Existing confusion seems to be based upon (a) a general perception of stress as being a positive, negative, or neutral phenomenon, and (b) ambiguity surrounding three separate, yet related terms--stress, stressor, and stress reaction. In any case, Selye's (1956) widely accepted conceptualization and description of stress provide clarification and understanding.

Selye's Concept of Stress

The father of stress research, Hans Selye (1956), who has spent over 40 years studying the impact of stress on the body, described specific demands continuously made upon the body (i.e., cold, heat, drugs, hormones, sorrow, joy, etc.). These agents or stressors all share the following characteristic: They increase the demand upon the body for adaptation or readjustment. This need for readjustment is nonspecific; regardless of what the specific demand might be (pleasant or unpleasant), it requires adaptation.

In his work with animals, Selye discovered that the stressor was not the decisive factor, but what a person chooses to do about it. Unlike the previously held notion that all stress is bad, Selye demonstrated how stress can be growth provoking. Under tremendous stressors, such as war and other disasters, individuals have risen to their most noble selves in order to survive. Furthermore, the ability to adapt under stress seems to enhance positive self-concept. Whether stress exerts a benign or adverse effect depends upon three factors: (a) the

possession of effective coping behaviors combined with feedback about the degree of effectiveness, (b) the predictability of the stressful situation, and (c) the duration or repetition of stressful circumstances (Hunter, 1977).

While studying rats, Selye discovered elements that seemed to enable these rodents to better combat the debilitating physical effects of stress. Rats who learned how to press a button (competence) to avoid an electrical shock (stressor) suffered little more negative physical changes than did control rats who had experienced no shock at all. A third set of rats who experienced electrical shock with no opportunity to control it suffered tremendous negative effects. When the rats learned to perform an effective coping behavior (button pressing), they were better able to withstand the negative effects of stress. Based on these findings, one potential ameliorator of stress may be competence --the ability to know what to do in a given situation.

When Selye introduced a signal to the rats just before the electrical shock, he discovered that they were able to adjust to the deleterious effects of the stressor almost as well as the control group. Again, the rats that received no warning of the forthcoming shock suffered considerable tissue damage. Thus, predictability of potentially stressful situations may be another factor which enables adaptation under stressful circumstances. Perhaps the ability to predict what is coming provides a person with the opportunity somehow to prepare or brace oneself.

In another experiment, Selye disconnected the button which the rats had pushed to avoid electrical shock, thereby making both competence and prediction useless. Under these conditions, the rats suffered even more

damage than those animals who had been shocked without an opportunity to push a button to avoid the shock and without a light to predict oncoming shocks. Because it wrecks both competence and prediction, change can be extremely stressful. Change produces stress, and too much stress produces illness (Johnson, 1981).

In summary, a stressful situation may be growth provoking or debilitating depending on the predictability and duration of the stressor as well as an individual's competence in the utilization of effective coping behaviors. Although identification of stressful situations (stressors) is helpful, according to Selye, what a person chooses to do is more important.

Stress-Related Disorders

Our fast-paced life style has been related to an increase in stress-related disorders such as everyday occurrences like noise, pollution, lack of time or adequate space, and competition. Medical and psychological research has established that certain life events are associated with illness.

The famous research of Holmes and Rahe (1967) resulted in their life change index, the Social Readjustment Scale. After systematically correlating 43 common life events (i.e., relocating, birth of a child, marriage, job change, etc.) with the onset of illness, these researchers demonstrated that normal life events, perceived as stressful, can cause a neurophysiological imbalance which may, in turn, lead to the start of one of many stress-related disorders. Particularly when they occur in rapid succession within a specific time frame, such stressful life events increase the chances of a psychological or physical disorder.

A growing body of evidence supports the premise that stressful situations can lower bodily resistances and thereby increase the chances of illness (Dohrenwend & Dohrenwend, 1974; Holmes & Holmes, 1970; Holmes & Rahe, 1967; Rabkind & Struening, 1976; Rahe, Meyer, Smith, Kjaer, & Holmes, 1964; Rahe, 1968; Wolf, 1965; Wolf, Wolf, & Hare, 1950). Finally, major medical texts attribute from 50 to 80 percent of all diseases to psychosomatic or stress-related origins (Pelletier, 1977).

Even though stress can lead to physical illness, it can be harnessed to speed our work and save our lives (Fisher, 1980). For example, people who respond to the stress of cancer by resolving to survive will live longer than those who give up. Illness sometimes forces one to take time out to find the necessary help to solve the problem (Johnson, 1981).

Psychological defense mechanisms which have been categorized as psychotic, immature, neurotic and mature (Vaillant, 1977) and the fight-or-flight response (Johnson, 1981) are normal responses to stress. When under extreme stress even healthy adults may regress to primitive behaviors. Although such behaviors help relieve the pressure, they do nothing to remove the causes of distress.

Encounters with pleasant stress (eustress) and/or destructive stress (distress) are not as important as the intensity of the stressor. Thus, it is immaterial whether a situation is pleasant or unpleasant--the intensity of the demand for readjustment or adaptation is the crucial variable (Goodall & Brown, 1980). According to Selye (1974), prolonged exposure to stress uses up one's adaptation reserve, which cannot be replaced.

As previously stated, stress is an inherent part of life; as such, it affects all aspects of life. Stress is often considered under general categories such as personal stress, occupational stress, environmental stress, etc. Since this investigation was concerned with job-related stress, specifically within the teaching profession, a brief overview of occupational stress research is followed by a review of the educational literature as it relates to teacher stress and burnout.

Occupational Stress

A wide body of literature surrounds the topic of on-the-job stress. In this respect, both environmental factors, such as noise level, temperature and safety factors, and psychosocial factors and their effect on a worker's general health and well-being have been investigated. The relationship between job demands and worker health has been cited in numerous articles (Beehr & Newman, 1978; Rohmert & Luczak, 1979; French, Note 1).

Potential stressors common to most occupations have been identified by Needle, Griffin, Svendsen, and Berney (1980) as: (a) job content or the challenge of the task itself, (b) conditions at work, (c) relationships with co-workers, (d) promotional opportunities, (e) financial rewards, (f) resource adequacy, and (g) organizational role. Other factors said to cause high stress among workers include isolation from colleagues, low status, unpredictability of job requirements, high rate of involvement with those who are ill, lack of guidance and training, and lack of recognition.

Although most workers experience job-related stress at some time, continuous occupational stress is a serious hazard to a worker's physical and psychological health and may cause poor work relations, lower

productivity, high job turnover, and high absenteeism (Mackay & Cox, 1978). Recently, one professional group, air traffic controllers, put their jobs on the line to fight for what they deemed compensation for the high stress level associated with their work. Probably, many other groups feel a great deal of stress, but are less willing to risk their jobs especially in view of the unsuccessful outcome of the air traffic controllers' demands.

Occupations at the lower end of the socioeconomic scale have been said to present a higher level of physical and emotional stress (Kahn, 1978). In its most severe form, the stresses of one's work have been said to lead to suicide (Brodsky, 1977).

Using a definition of stress meaning any deviation from normal responses in a person, Caplan (Note 2) conducted extensive research on 23 occupations ranging from unskilled blue-collar jobs to professional careers such as medicine and engineering. Boredom, depression, and somatic complaints were highest among unskilled blue-collar workers who demonstrated the greatest under-utilization of skills plus high levels of ambiguity about the future security of their jobs. Low social support from supervisors and others at work was one of the main stress predictors cited by Caplan and others (LaRocco & Jones, 1978; Pinneau, Note 3).

Orzack (1959) surmised that work is a center of self-identification for the professional person. However, Miskel, Glasnapp, and Hatley (1972) concluded that while most studies of organizational job satisfaction have been based on the value judgment that the job was the primary form of needs satisfaction, the primary focus of many people's lives is not their job, but home and community.

The physical and mental health ills brought on by stress have been noted as the most costly problem facing American business today. General Motors, for example, spent $1.4 billion in 1979 for employee health benefits, i.e., about $2,300 per employee. Costs in terms of low morale, absenteeism, or low productivity brought on by ill health were not included in this figure (Menezes, 1980).

In an attempt to forecast and prevent conditions that cause stress, Dr. Charles Sheridan of the University of Missouri at Kansas City has developed a stress measurement scale to assist businesses and individuals in dealing with this problem. In the absence of a diagnosed disease, most people assume a healthy state. Sheridan (Note 4) advised a need to reorient our thinking toward achieving optimal wellness rather than reserving treatment for breakdowns. Identification of environmental stressors and stress-related symptoms using Sheridan's scale is preliminary to one's effort toward optimal wellness. Thereafter, stress-related symptoms can be decreased by increasing personal and environmental resistance resources.

Stress in Education

Although teacher stress has been discussed in relation to most teaching fields and levels (Betkouski, 1981; Ellenburg, 1975; Fooner, 1981; Reed, 1979; Sobel, 1982), the field of education suffers from a serious shortage of empirically based stress literature.

Teaching today has been labeled a high-stress occupation (Needle, et al., 1980). Sparks (1979) suggested that the satisfaction teachers derive from their work and the energy and creativity they bring to their classrooms is diminished due to job-related stress. What is more, "it

is probable that job stress negatively and substantially affects the classroom environment, the teaching-learning process and attainment of educational goals and objectives" (Needle et al., 1980, p. 96).

Extensive research conducted with teachers in Great Britain led to the following formulation of teacher stress by Kyriacou and Sutcliffe (1979b).

> A response syndrome of negative effects (such as anger or depression) usually accompanied by potentially pathogenic physiological changes (such as increased heart rate) resulting from aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitute a threat to his self-esteem or well being and by coping mechanisms activated to reduce the perceived threat. (p. 89)

The authors surveyed a sample of teachers from 16 medium-sized, mixed comprehensive schools in England regarding three areas--overall job satisfaction, absenteeism, and intention to leave teaching. Results supported their predicted negative association between self-reported teacher stress and job satisfaction ($r = .27$; $p < .01$) and a positive association between self-reported teacher stress and intention to leave teaching ($r = .18$; $p < .01$). However, their predicted positive association between self-reported teacher stress and frequency of absences failed to reach statistical significance ($rho = .09$; $p < .10$). In summarizing significant associations between 14 sources of stress and the three areas surveyed, Kyriacou and Sutcliffe surmised that the conditions of work rather than the experience of teaching may provide the stress which most strongly contributes to job dissatisfaction.

From her factor analysis, Clark (1980) reported that job-induced stress as perceived by classroom teachers in Georgia and Alabama was a multidimensional concept composed of five elements: (a) feelings of personal inadequacy, (b) principal-teacher professional relationships, (c) collegial relationships, (d) group instruction, and (e) job overload.

In a health survey conducted by Sylwester (1977), stress was named as the most serious problem with which teachers had to contend. Hence he suggested use of the Chinese symbol for stress, which is composed of two characters--danger and opportunity--as a means of conceptualizing stress and how to handle it.

The purpose of this section was to review the literature related to stress in the teaching profession. The remainder of this review will be organized under four general areas: (a) incidence of stress in education, (b) causes of stress in education, (c) effects of stress in education, and (d) coping with stress in education.

Incidence of Stress in Education

Accurate assessments of the incidence of stress among educators are difficult to obtain due to the nature of the very concept of stress. Some teachers may be reluctant to admit to experiencing stress due to fear of reprisal or what may be perceived as a sign of weakness. Consequently, studies in this area have relied on small numbers of teachers and self-reported data.

Coates and Thoresen (1976) reported that as many as 78 percent of teachers in one survey indicated they were working under moderate to considerable stress (National Education Association, 1967). Similarly, Kyriacou and Sutcliffe (1978) found that 20 percent of 257 British teachers surveyed in one study and 30.7 percent of the respondents in a

second study reported that being a teacher is either very stressful or extremely stressful. According to Slan (1980) 32.28 percent of the 158 elementary teachers who responded to her questionnaire experienced a high level of stress. More specifically, single female teachers reported a higher level of stress than married respondents. Female elementary teachers with dependents were reported as highly anxious individuals. Further, female elementary teachers with 10 years of teaching experience and below showed a higher degree of stress than respondents with 11 years' experience and above, while younger female elementary teachers showed a higher level of stress than older teachers.

Bucklew (1981) concluded that teacher stress was prevalent in Florida, since 41 percent of her 248 respondents reported that being a teacher was either very stressful or extremely stressful. Finally, in a national sample consisting of 255 female elementary teachers, nearly 40 percent indicated that, if they could rechoose their career, they would not again choose elementary teaching (Wangberg, et al., 1982).

Based on the findings of studies such as those outlined above, the NEA (1979) has encouraged the development of stress management training. This national teacher organization believes that the dynamics of our society along with heightened public demands have produced adverse and stressful classroom and school conditions. Such conditions, in turn, have led to increased emotional and physical disabilities among teachers and other school personnel. NEA has urged that the harmful effects of stress on all school personnel be recognized, and has demanded the implementation of procedures to ensure confidentiality and treatment without personal jeopardy.

Causes of Stress in Education

Among the factors reported to cause stress in education, student misbehavior, time pressures, and interpersonal conflicts are said to prevent teachers from teaching effectively and thus to cause stress (Needle et al., 1980). McGuire (1979) cited violence, vandalism, disruptive students, inadequate salaries, involuntary transfers, interfering parents, oversized classes, and excessive paperwork as the most common stressors.

Alley (1980) pointed out that stressors have multiple causes--not all of them people- or job-related. He described four categories of stress sources: (a) personal, (b) interpersonal, (c) institutional, and (d) societal.

Demographic factors. Teacher stress has been studied in various types of school districts--urban, suburban, and rural. Bloch (1977) investigated stress among 252 inner-city teachers in the Los Angeles area who had been referred for psychiatric evaluation. These teachers seemed to be experiencing "combat fatigue" due primarily to having little control over their jobs and the lack of an outlet for their frustrations.

Goodman (1980) surveyed nine elementary schools (173 teachers) in inner-city settings in California. His discriminant analysis of the data revealed that Black, Caucasian, and Hispanic schools demonstrated characteristic stress patterns, with teacher ratings of overall site stress at Hispanic schools being dramatically high.

From 49 potential stress sources, 1,468 teachers in a suburban Nevada county rated the following eight factors as most stressful: overcrowded classrooms, threat of lawsuit, student violence, paperwork,

disagreement with principal, involuntary transfers, discipline problems, and loss of personal time.

In rural areas, teacher retention and recruitment issues have been called problematic in 94 percent of 19 states surveyed, while high rates of teacher stress and burnout have been attributed to inadequate staff development programs (Helge, Note 5).

After surveying 136 graduate students, St. Clair (1981) concluded that the demographic variables of grade level taught and years of experience produce no significant difference regarding extent of educator stress. However, a significant difference was noted between groups of educators in extent of stress by job satisfaction. That is, the level of job satisfaction in education produced a significant difference in educators' stress scores.

Personality traits. As seen in previous sections, attempts have been made to associate factors such as sex, age, and length of teaching service with stress. However, personality traits rather than biographical characteristics appear to be more important determinants of teacher stress (Kyriacou & Sutcliffe, 1978). For example, Feshbach and Campbell's (Note 6) view of stress as the teacher's selective reception of demands from the environment supports this hypothesis.

Peterson (1979) outlined the personal characteristics of the "average" educator.

> Beginning teachers are characterized by high job morale which gradually declines during the first years of teaching but returns in a teacher's mid thirties and forties. Again, the era from age thirty-five to age fifty appears to be one of high morale and career productivity. After the age of fifty,

teachers again experience a change in outlook. They are less enthusiastic about their students and teaching in general. (p. 16)

Another more detailed portrait of the adult teacher's life cycle was described by Spaniol (1979) who envisioned the following four stages.

1. The (terrible) twenties: A period of idealism and impatience. Change must be quick but without the experience to provide a workable basis for ideals. There is a contradiction that may lead to impetuous behavior regarded by authority figures as rebellious and by adolescents as patronizing. Young teachers are caught in a bind: Too young to identify with their colleagues but too old to identify with students. They suffer from isolation and feelings of nonacceptance. (To foster the dreams young teachers have about education, they need mentors; yet few school structures encourage such a relationship with older teachers conscious of protecting their own positions).
2. Thirties transition: Studies seem remote. Teachers may begin to feel that their career choice was wrong. In the late thirties, they become "systems people," and the energy they may have expended in trying to change things now is used up in overtime, deadlines, and upward mobility.
3. Forties (or the downhill drag): Teaching loses its challenge. The 40-year-old knows the rules and the game. Life is predictable, change opposed, ideas romantic.
4. Fifties: There's a sense of total self-acceptance and tolerance for others. Teachers in this age group can afford to be philosophical; they are the survivors. School systems largely

depend on the 50-year-olds. They are the master teachers, emotionally stable, in harmony with their environment. (p. 59)

Coates and Thoresen (1976) stated that teacher personality and mental health are important as these are reflected in classroom behavior. Some might even consider these characteristics more important than a teacher's knowledge of subject matter and teaching methods. In their analysis of 15 research studies on the reasons for beginning teachers' sources of anxiety, Coates and Thoresen arrived at results similar to those of other studies, leading to the conclusion that stress is indeed a factor which must be dealt with.

Decision making. Participation in the making of decisions that affect one's work as a significant factor in employee morale, productivity, and job satisfaction has been widely recognized for some time (Barstow, 1970). Thus, alienation from supervisors due to lack of teacher participation in school decision making has been suggested as the major contributor to low teacher morale (Spaniol, 1979). When teachers are given few opportunities to participate in policy making, they feel powerless and frustrated (Bundy, 1981).

However, a study aimed at determining the way in which teachers adapt to the demands of their organization revealed that conflict situations occurring in the daily functioning of schools were related not just to decision-making processes; they also resulted when teachers did not fulfill their own expectations (Ferron, 1971).

Regardless of their personality and teaching style, all teachers are "deeply affected" by stress according to Samples (1976). He theorized that society's highest stress ecologies are schools and that classroom teaching entails regular, every-day tension. Teachers are

constantly asked to make specific, personal decisions about what he calls "the big triad of education: content, methodology, and self" (p. 24). In the author's opinion these demands are more stressful for the special educator than for the regular education teacher due to the mandated clauses of P.L. 94-142.

Low social status. Since 1926 sociologists have been measuring the prestige which the American public assigns major occupations. During this period, the status of the public-school teacher has been on the decline, "ranking well below that of the major professions, business ownership and management and those of culture such as the visual and performing arts" (Reiss, 1970, p. 22). Little has been done either within teacher organizations or by school governance to give any real recognition to the career teacher. The quality concept regarding teachers (they must be treated alike) has actually tended to prevent rather than encourage professional recognition" (Corey, 1970, p. 10). Along with respect, teachers locked into a limited range of income, feel they deserve higher salaries.

In addition to the few extrinsic rewards associated with teaching, isolation best describes teachers' work environments. Thus, teachers have little opportunity to interact with colleagues or to support one another emotionally. For the most part, they are time and space bound. In most elementary schools teachers spend all day in one classroom with one group of students. At the secondary level, teachers often spend most of their time in one room although with different groups of students. Free periods and lunch hours are usually spent within the school building, often with students (Leiberman & Miller, 1978; McGuire, 1979).

In a recent interview, Fine summarized the situation. "Teachers have gone from a position of being the most well-respected persons in the community to persons that have lost esteem. The public has lost faith in education and teachers. All of this contributes to frustration" (Silas, 1982, p. B3).

Organizational factors. Stress in the work setting may result from uncertainty, role overload or underload, abrupt and unplanned organizational and role changes, and poor job design (Colarelli, Note 7). Using a forced-choice Q-sort ranking instrument, 91 teachers rated "time management" as the highest of 14 stressors (Manera & Wright, 1980).

Nonacademic factors within the school setting may also be critical sources of teacher stress. For example Purkerson (1980) suggested that the survival rate of first-year teachers is not based on academic training as much as the ability to cope with noninstructional concerns--administrative details, human-relations skills, and teacher professionalism. Two hundred forty-eight teachers in Florida perceived inadequate teaching salary as their highest priority stressor (Bucklew, 1981). In a stress study conducted in Texas, Tompkins (1980) reported the largest stress producers to be administrative issues such as poor facilities, lack of materials, administrative policies, and interruptions of classroom routine.

Clark (1980) developed and subsequently administered a teacher occupational stress questionnaire to 391 classroom teachers in Georgia and 400 teachers in Alabama. Results of this attempt to identify and analyze stress factors as perceived by classroom teachers indicated that job-induced stress is a multidimensional concept composed of five factors: (a) feelings of professional inadequacy, (b) principal-teacher profes-

sional relationships, (c) collegial relationships, (d) group instruction, and (e) job overload.

Students. Student behaviors have been cited as another cause of teacher stress (Bucklew, 1981; Jones & Emanuel, 1981) along with student absenteeism, physical assaults on teachers (Bloch, 1977), and vandalism of property (Alschuler, 1980).

Teachers have described today's students as different from those encountered in the 50's and 60's. Students have less academic background and require more help. Some are disrespectful or even hostile (Watkins, 1982).

Half (50 percent) of Tacoma, Washington's 1500 teachers who responded to a stress survey rated "managing disruptive children" as the most frequently occurring stressor, while "involuntary transfers" was considered the most stressful factor (Young, 1980). The results of this survey led to the development of a cooperative stress-reduction program, including a counseling program for troubled employees and a resource book for each teacher.

Factors outside education. Personal problems, financial pressures, and other factors outside the school setting also influence teachers under stress. Anyone who has responsibility for the general well-being of others without complete control experiences stress. Teachers, like air traffic controllers, use their training and expertise to make decisions affecting the lives of others without the power to control all related factors. For this reason, both teaching and air traffic controlling are said to be high-stress occupations.

The causes of teacher stress are complex and, therefore, the solutions are not simple. To arrive at a comprehensive picture, it is

necessary to evaluate schools for the presence of stress conditions, teachers for how they respond to stress, the types of support systems within the school, and the success of the governance program (Cacha, 1981).

Effects of Stress in Education

As in other helping professions, the effects of stress assume various psychological and physiological manifestations. Perhaps the most devastating effect of teachers under stress is the harmful effect of this condition upon their students. In addition to lowered academic performance, students may suffer lower self-esteem as a result of uncaring or preoccuppied teachers (Partin & Gargiulo, 1980). Dunham (1977) listed anger, self-doubt, lack of confidence in handling difficult situations, exhaustion, depression, hypertension, neurodermatitis, ulcers, migraines, colitis, absenteeism, and early retirement as signs of job-related stress in teachers. Similarly, Pratt (1978) using a Teacher Event Stress Inventory discovered a positive association between the amount of stress reported and illness.

Physiological effects. Nine thousand teachers responded to a poll conducted by Learning magazine in cooperation with the American School Health Organization (Landsmann, 1978). Eight-four percent of the participants responded that they believed teaching presented health hazards. In this connection, the major factor affecting the respondents' health was reported to be stress. Twenty-seven percent indicated that they had chronic health problems, 40 percent reported taking prescription drugs, and seven percent had sought psychiatric help. The respondents reported to miss school due to illness an average of four and one half days per year. The most frequently reported causes of stress were large class

size, increased discipline problems, few or no breaks, and public pressure to manage all the ills of our society. Most of those who responded (80 percent) reported that they had changed their views about teaching since they entered the profession.

Forty-five percent of the 960 randomly selected teachers from Minnesota who returned a teacher stress questionnaire reported experiencing at least one chronic health condition, such as high blood pressure, arthritis, lung or breathing problems, stomach ulcers, and colitis· (Needle, Griffin, & Svendsen, 1981). Furthermore, most of the respondents (96 percent) reported to experience one or more of these stress symptoms sometimes or often. Feeling completely worn out at the end of the day and finding it difficult to get up in the morning were the most frequently reported symptoms. As expected, teachers with higher stress reported more somatic symptoms. Somatic symptoms and general well-being were highly correlated (r=.67). Although all teachers experienced some stress, strain, or pressure, the majority (72 percent) of the teachers in this study were in good, very good, or excellent spirits. The crucial factor revolves around the nature of the stress, its persistence, and how to cope with the stress. Even though no significant relationship was discovered between health behaviors and stress, those teachers who reported using positive behaviors (sleep, exercise, nutrition) reported higher general well-being (r=.41). In addition to somatic complaints, perceived job stressors were also related to health and well-being. Participants who perceived their principals as competent and supportive also reported greater well-being and fewer symptoms.

Excessive tension seems to be the most common symptom associated with stress (Frankenhaeuser & Gardell, 1976; Kyriacou & Sutcliffe, 1978). Tension is an inevitable part of life, and can be a positive motivation for coping. Yet, extreme and constant tension is detrimental to physical and psychological health. "When change, disruption, and conflict are unrelenting, an individual does not have time to adjust" (Fooner, 1981, p. 13).

Absenteeism. A national survey by the Educational Research Service indicated that teacher absences were a major concern in 65 percent of the surveyed school systems due to the disruption they create in learning and their effect on already strained budgets (Schecker, 1981). According to the study, the average cost of teacher absences to school districts during 1978-79 was $924 a year per teacher.

Teachers in larger school systems (25,000 students or more) were found to be absent an average of nine days a year, while teachers in smaller districts (less than 2,500 students) averaged 6.5 days. Teachers from the middle states had the lowest absentee rates (7.4 days a year). Although 64 percent of the absences were said to be due to personal illness, 9.3 percent were attributed to personal stress.

Knowles (1980) discussed teacher absenteeism as it related to 11 selected, independent variables--age, sex, educational training level, career experience level, marital status, travel distance, class size, school level assignment, salary level, service model assignment, and exceptionality assignment. After an exhaustive review, he summarized the following general trends.

1. Younger teachers were generally absent for shorter periods of time than older age groups, but more frequently.

2. Married, but separated, workers in business, industry, and education consistently showed higher rates of absenteeism than other marital status categories.

3. In general, women in all marital categories were absent from school more than men.

4. Elementary teachers were found to be absent more than secondary teachers, which was attributed to the fact that there are more females teaching at this level.

National teacher organizations are concerned with the absenteeism rate. The relationship between unhappiness with teaching and absenteeism has been acknowledged (Schecker, 1981). Teachers experiencing high degrees of stress, who are reluctant to seek help or unable to leave the profession, may be calling in sick more frequently. The proportion of teacher absenteeism due to stress is difficult to obtain. Teachers frequently are required to specify their reasons when requesting personal leave, thereby encouraging the tendency to use sick leave for stress-related reasons.

One survey of 1500 teachers in Tacoma, Washington resulted in a negative correlation between the number of days absent from school and the reporting of stress. This paradoxical finding was interpreted as a sign of the highly stressed teacher's striving to keep up appearances, while experiencing guilt feelings (Young, 1980).

In some districts rising absenteeism rates may be linked to lack of incentive for perfect attendance. For example, although most teachers can accumulate sick leave days from year to year, frequently they are not paid for unused sick leave days upon retirement. Overall, teaching offers few incentives and very little recognition for a job well done.

The increase of teachers who stay home with nonexistant illnesses is a manifestation of a relatively new occupational affliction: teacher burnout. In some areas, the reported absenteeism rate among teachers is twice that found in private industry.

Attrition. It has been hypothesized that teacher attrition rates have decreased recently due to poor economic conditions and high unemployment figures.

A survey by Sparks (1979) revealed that 46 percent of the teachers in Michigan who completed his questionnaire were dissatisfied with their job. The same percentage of respondents said that if they had it to do over, they would not choose teaching as a career. Fifty percent reported that it was at least possible that they would change occupations within five years. Similarly, Bentzen (1980) reported that one-fourth of all teachers surveyed would not re-enter the teaching field. NEA (Toch, 1982) estimated the figure to be more than one-third. "Stated in terms of the child, the odds of encountering at least several teachers who would really rather be doing something else are extremely high" (Goodall & Brown, 1980, p. 17).

Among the increasing number of teachers under stress are those who choose to retire early or leave the classroom for another job. This tendency has caused concern about the caliber of the replacements of such teachers and the future of what used to be an honored profession. Because many of the brightest potential teachers are choosing careers outside education, it is not unlikely that second-raters will be left to teach America's future generations.

Coping with Stress in Education

Jones and Emanuel (1981) delineated three alternatives for teachers under stress: "(a) remaining a teacher and doing nothing to improve conditions; (b) remaining a teacher and attempting to change the negatives associated with the system to help meet personal needs; or (c) leaving teaching as a career" (p. 212). As already mentioned, some teachers under stress have chosen alternative (c) and left the profession.

Barrow (1981) recommended two classes of strategies for coping more effectively: (a) managing the environmental situations that produce stress and (b) achieving internal self-regulation of the stress physiology. Although elimination of stress-producing problems would be ideal, no one has the ability to control his/her environment. Still, we are able to control our own attitudes and behaviors (Johnson, 1981). An important component of this issue is the degree to which a person feels "in command" of his/her own life. It is important for one to know what the stressors are and to determine if they are internal or external.

The external changes suggested in the literature for alleviating the stress level of those who plan to remain in their jobs include: improvement of the organizational structure (Spaniol, 1979), raising the status and power of the professional teacher (Bundy, 1981), establishing Personal Help Centers (Spaniol, 1979), and maintaining ongoing support groups (Partin & Gargiulo, 1980). In addition, personal strategies such as relaxation therapy, good nutrition practices, exercise, and improved communication skills have been suggested as means of reducing teacher stress (Lipovenko, 1981).

Of the four coping measures employed in one study--substitution of rewards, positive comparisons, optimistic action, and selective ignoring--

only one, "positive comparisons, significantly reduced the impact of stress on general well being and somatic complaints" (Needle et al., 1981, p. 180).

Slan (1980) analyzed the data elicited from the returned questionnaires of 158 elementary public-school teachers in a Georgia school district to examine the degree of anxiety and utilization of specific coping preferences. She reported that 32.28 percent of the teachers experienced a high level of stress. Single female teachers reported a higher level of stress than did married respondents. The elementary teachers dealt with stress in a variety of ways. The least experienced teachers preferred to use consulting techniques and extra-work activities, while more experienced teachers showed no clear coping preference. Younger teachers preferred extra-work activities, while older teachers preferred change of normal routine. Married respondents preferred consulting techniques, extra-work activities, time-out activities, and change of normal routine, while single respondents showed no clear coping preference.

The implication has been drawn that individual teacher action is ineffective for changing forces such as job insecurity, low salaries, and lack of administrative support. Therefore, it is futile to ask individual teachers to assume total responsibility for coping with stressors whose sources originate in the social, economic, and public environments in which they work.

Improved preventive measures and more realistic inservice and preservice training programs are frequently recommended in the literature. Prospective teachers must become aware of the causes and effects of stress in education and adept at recognizing early warning signs (Partin

& Gargiulo, 1980). Practicing teachers need similar support on an ongoing basis.

Stress in Special Education

It has been hypothesized that, compared to regular educators, special education teachers are subject to additional emotional stress due to the nature of their jobs and the problems associated with exceptional children (Weiskopf, 1980). DeShong (1981) referred to mounting data on stress indicating that the special educator is particularly vulnerable to stress and its accompanying complications. She suggested two reasons why special educators experience damaging stress. First, careers in special education possess characteristics known to create potentially highly stressful conditions, and second, "preparation has not included learning to produce good, healthy emotions, while functioning in an unpredictable, sometimes difficult, and always changing environment" (1981, p. 19).

Until recently, no organized attempts were made to investigate stress in special education. Limited studies of two types have been conducted over the past few years. First, some investigators have attempted to compare special education teachers with regular education teachers on various stress-related issues. A second type of investigation involves only teachers from one or more categorical areas of special education.

It is generally believed that special education teachers experience higher levels of stress than regular-class teachers. However, an investigation of stress as a result of compliance with the mandates of P.L. 94-142 among special education teachers, resource room teachers, and

regular classroom teachers revealed that special education teachers experienced less stress due to this mandate than did the other two groups of teachers (Bensky, Shaw, Gouse, Bates, Dixon, & Beane, 1980). Two predictors of stress--unclear role expectations and discrepancy between teachers' perception of role versus others' expectations of the teacher's role--were reported. The job-related stressors reported by each of the three groups were rank ordered. The most stressful components reported by special education classroom teachers were (a) pupil load, (b) teaching, (c) job-related work after hours, (d) interaction with parents, and (e) parent conferences. Resource room teachers reported (a) diagnosis and assessment, (b) pupil load, (c) teaching, (d) evaluation by supervisor, and (e) job-related work after hours as the most stressful job-related factors. The regular education teachers' highest ranked stressors consisted of (a) diagnosis and assessment, (b) interaction with parents regarding placement decisions, (c) job-related work after hours, (d) parent conferrences, and (e) teaching.

According to Shaw, Bensky, Dixon, and Bonneau (1980) causes of stress and burnout differ between regular educators and special educators. Stressors identified by regular educators focus on the students, while conditions considered stressful by special educators relate to the manner in which P.L. 94-142 has been implemented during the period from 1975 to 1980 (Bensky et al., 1980).

D'Alonzo and Wiseman (1978), Morsink, Blackhurst, and Williams (1979), and Ryor (1978) all concurred with the above position. Thus, these investigators suggested that special educators' stress reactions are resulting in rapid staff turnover, interpersonal problems among

professional groups (regular and special educators and administrators) and resistance to change. Furthermore, Dixon, Shaw, and Bensky (1980) noted that special educators used nonproductive approaches in dealing with stress including less direct service to children, lowering expectations for students, taking drugs (liquor, pills), and resigning. These approaches lead to reduced quantity and quality of services for handicapped students. Increasing numbers of special educators are becoming physically, psychologically, and spiritually exhausted (Dixon et al., 1980).

In another study focusing on the relationship of special education teacher job satisfaction and implementation of P.L. 94-142 (Boeck, 1979), no significant relationship was discovered between the two factors. However, as district size increased, job satisfaction decreased for the 872 teacher respondents.

A study using 152 pairs of special and regular class teachers in Iowa (Hammer, 1970) did not reveal a significant difference between the two groups in stress by age, sex, marital status, or level of preparation. Nevertheless, special education teachers were found to have held more different teaching positions, to spend less time in their current position, and to tend to have regular class experience. Regular classroom teachers, on the other hand, had little special education class exposure. Hammer reported that the special class teachers tended to be less satisfied with all job factors than were the regular class teachers.

Tompkins (1980) conducted a study in one region of Texas in an effort to: (a) measure anxiety levels, (b) identify stress factors among teachers, and (c) determine whether stress levels or factors varied between regular and special educators. Results showed no significant differences between the anxiety scores of the two groups of teachers.

A study conducted by Schuetz in California (1970) showed that the leading satisfier for teachers of the secondary educable mentally retarded (EMR) was the success they experienced in meeting the objectives of the program. In contrast, the most unsatisfactory factor was district policies interfering with the staff's ability to meet such objectives. In this study both regular and special education secondary EMR teachers were found to be satisfied and dissatisfied largely by the same job aspects; however, the EMR teachers put more emphasis on meeting student objectives. As a result of the above findings, it was recommended that administrators be provided special education training, especially to gain an understanding of exceptional children.

Amos (1971) randomly sampled 418 Ohio teachers of educably mentally retarded (EMR) children to test their job satisfaction and commitment to teaching. The results indicated that teachers under 25 years of age felt a higher degree of satisfaction compared to teachers between 25 and 34 years of age. After 34, teachers reported higher job satisfaction. Women seemed to be more committed to teaching and slightly more satisfied than men. In terms of teaching level, elementary-level teachers were somewhat more satisifed and committed. The factors considered to contribute most to satisfaction/dissatisfaction were supervision, inservice activities, certification patterns, opportunities to make contributions to the field, lack of adequate materials and supplies, and the need for better understanding of mental retardation by administrators, regular teachers, and the community as a whole. The author pointed out the need for more research regarding these factors in efforts to gain support at state and national levels for changes and improvements.

In their study of 173 special educators of learning disabled students, Olson and Matuskey (1982) reported that excessive paper work, inadequate salary, student discipline, inadequate planning time, student attitude, and pupil-teacher ratio emerged as stressors. Sex, age, amount of education, length of teaching, and teaching level were not influential stress factors.

The Burnout Syndrome

One serious reaction to job-related stress is burnout which is becoming increasingly common as evidenced in the literature. As with the concept of stress, the term burnout is frequently and indiscriminately used. Because of problems with definition and frame of reference, few empirically based studies have dealt with burnout. Currently, however, various professional groups are attempting to define this rather prevalent phenomenon.

Definition

Maslach (1978b) described burnout as an emotional exhaustion syndrome resulting from the stress of interpersonal contact. In addition to the nonspecific responses of other forms of stress, Maslach discovered a very specific and distinctive kind of emotional exhaustion common to those in the helping professions. The burned-out individual loses positive feelings, sympathy, and respect for his/her clients (Maslach & Pines, 1977). Deterioration of performance and role conflict constitute other elements of the syndrome (Kahn, 1978).

Freudenberger (1980), a psychoanalyist, described "burnout" as "a state of fatigue or frustration brought about by devotion to a cause, way of life, or relationship that failed to produce the expected reward" (p. 13). According to Freudenberger, people who suffer from this condition

tend to be high achievers with intense and full schedules, who do more than their share in everything they undertake and who will not admit their limitations. Often such persons get the feeling that they are "batting their head against the wall," day after day, year after year. Due to their idealism and good intentions, burned-out teachers have visions of improving conditions and sending grateful, well-educated students out into the world. Unfortunately, individuals in the helping professions, such as special education teachers, sometimes experience a different situation--heavy caseloads, lack of recognition from parents and supervisors, role conflicts, and students who show limited progress. As their frustration mounts, teachers build walls of their own. They begin to anesthetize their feelings and start functioning in a more mechanical manner at school. At its most intense level, the strain leads to a depletion of vitality, and energy, and an inability to function.

Although burnout can occur in any occupation, it is reported to be particularly high among those in the helping professions (Foster, 1980). Maslach (1978a) attributed this finding to the fact that individuals in the helping professions maintain such close contact with and responsibility for other people--a situation which is emotionally difficult on a continuing basis. Even though professionals in these areas work very hard to minimize human suffering, strong gains are often not apparent or immediate (Pines & Aronson, 1981). Swogger (1981), who defined burnout as a special sort of stress reaction to work and organizational pressures, speculated that although caring acts are powerful motivators, they also make one more vulnerable to burnout.

Skinner (Note 8) described stress and burnout somewhat more realistically as loss of courage to face responsibility. Certain personalities, such as those of overachievers and perfectionists, are more predisposed to burnout, especially in the face of great responsibility, with little or no authority (Lipovenko, 1981).

As evidenced in the studies just cited, no general consensus has been reached on terminology for the relatively new, but influential problem of burnout. At the same time, no singular definition of the condition has been agreed upon. Some define the ideas presented as "factors"; others see them as "variables"; or as "stressors." Names have been given to types of burnout and their symptoms. However, until some kind of agreement can be reached on such basic issues as definition and terminology, it will continue to be difficult to discuss, much less alleviate, the problem.

Correlates of Burnout

Burnout has been found to be highly correlated with certain indices of personal stress: increased use and abuse of alcohol and other drugs, mental problems, self-perceptions of being a bad person, and seeking counseling or psychiatric treatment for what is believed to be personal failure. When unresolved, job-related stress many times surfaces at home. Thus, burnout has also been correlated with increased family and marital conflict (Maslach, 1978b).

According to Otto (1980), burnout is a recognizable phenomenon characterized by withdrawal from the job, lack of motivation, and loss of compassion. His 30 volunteer subjects from across the United States reported data indicating that susceptibility to burnout is related more to personal disposition than situational factors; it is caused primarily

by personal reactions to perceived problems and the organizational milieu.

Freudenberger (1977) listed the characteristics of burnout as fatigue, irritability, depression, boredom, and resistance to change. The associated decline in performance and decreased commitment which lead to a decline in self-esteem and even despair may spill over into other areas of life and result in more serious symptoms such as marital conflict, divorce, alcoholism, and drug abuse (Cooper & Marshall, 1976; Maslach, 1978b; Swogger, 1981).

Stress itself is not the problem, however; rather, a person's inability to successfully adapt to a problem in the environment leads to burnout. When somebody is unable to cope, emotional or physical stress continues without relief and eventually leads to burnout. Working with people increases the likelihood of experiencing some degree of burnout. Parks and Fairchild (1981) categorized the major symptoms of burnout as follows: psychological, attitudinal, behavioral, and interpersonal.

Stages of Burnout

The term "burnout" does not describe a specific condition, but refers to an extreme reaction to job-related stress. As such, it is the final stage of physical and mental depletion resulting from excessive demands made upon one's time and energy.

While researchers have selected different terminologies to describe the stages of burnout, most agree that it takes place by degrees. Further, most concur that, not only does the professional suffer, his/her family and students, also feel the effects of burnout.

Jones and Emanuel (1981) described the burnout syndrome in three stages--heating up, boiling, and explosion. According to Reed (1979)

burnout is "career claustrophobia," whereas Spaniol (1979) referred to it as feeling locked into a job routine; hence he compared it to burns. First degree is characterized by short-lived periods of fatigue, irritability, worry, and frustration. Second-degree burnout is the same as first degree, except that it lasts two weeks or more. Physical ailments such as ulcers, migraines, and chronic back pain occur in third-degree burnout. Baldwin (1981) suggested five stages of burnout:

Stage I: Intimate Involvement - i.e., new job, overinvolvement.

Stage II: Exhaustion/Questioning - i.e., physical and emotional fatigue plus "grass is greener" thoughts.

Stage III: Balancing Act - i.e., conscious/unconscious choices causing adequate or inadequate coping mechanisms to develop.

Stage IV: Withdrawal/Disappointment - i.e., coping devices fail thus affecting work and home.

Stage V: Terminal Cynicism - i.e., self-preservation ("me") over self-management (p. 20).

Edelwich and Brodsky (1980) chose enthusiasm, stagnation, frustration, and apathy to describe the stages leading to burnout. The development may take place over a period of years, peaking and declining as the individual attempts to cope.

Burnout in Education

The burnout syndrome, long recognized as a problem in the helping professions (Freudenberger, 1977; Maslach & Jackson, 1978, 1979; Pines & Maslach, 1978) appears to be reaching major proportions in education. Thus, entire journal issues have focused on the topic of teacher

burnout. Educational publishing companies are advertising films, filmstrips, and tapes for inservice sessions, and workshops on stress and burnout are filled to capacity.

A Chicago teachers' union survey revealed that 56.5 percent of the 5,500 respondents experienced physical and/or mental illness as a direct result of their jobs (Walsh, 1979). Eighty-four percent of 9,000 elementary teachers confirmed the existence of health hazards in education (Rosenthal, Harlin, & Jerrick, 1976). A National Education Association (NEA) Teacher Opinion poll found that teachers were frustrated, and that one-third of those now teaching would not re-enter the field if they could start over (McGuire, 1979). As a further illustration of the scope and seriousness of burnout in education, the Tacoma, Washington, Association of Classroom Teachers (TACT), concerned about teacher burnout, won stress insurance to cover long-term disabilities stemming from mental as well as physical disorders ("Tacoma Stress Insurance," 1979). TACT members certified by a physician as physically or emotionally disabled can receive 60 percent of their salaries until age 65. Because an emerging research theme indicates that the source of burnout lies more in the situation than within the person (Maslach, 1978b), a close inspection of the educational milieu is warranted.

Parks and Fairchild (1981) described burnout as a colorful word used to describe a not-too-colorful process. They stated that stress and its traveling companion, burnout, have hit the profession of education broadside, (citing surveys to demonstrate the massive proportion of the problem):

1. According to an NEA opinion poll, 60 percent of the respondents did not plan to stay in teaching until retirement.

2. A survey conducted in Idaho revealed that the attrition rate for special education teachers with one or two years of experience was near 50 percent.

3. A study conducted in a San Diego school district showed that 90 percent of those surveyed reported stress as a common cause of sick leave.

Bloch (1977), a psychiatrist who worked with over 250 "battered teachers" during the 70's, suggested employment of the "three R's" to combat the negative effects of burnout--rotation, rest, and recuperation.

As mentioned previously, systematic research on teacher stress and burnout is scant (Walsh, 1979). Until recently, most of the available research focused on the student rather than teacher; however, an understanding of the stressors facing the staff person is critical (Maslach, 1978a). In an attempt to compile needed information, Adams (1975) made visits to a variety of classrooms across the nation to observe conditions which make teaching in public schools especially difficult.

Metz (1979) used small-group interview sessions and face-to-face interviews with Denver and Jefferson County public-school teachers who rated themselves as professionally burned out on a Likert-type scale. Seven major sources of professional burnout emerged: (a) administrative incompetence, (b) bureaucratization, (c) discipline problems, (d) lack of administrative support, (e) lack of positive feedback, (f) lack of opportunity for change, and (g) powerlessness.

In a review of research from 1960 through 1977, Olson and Matuskey (1982) identified the following sources as leading to burnout in regular educators: excessive clerical work or work overload, negative student

attitude, inadequate pay, pupil misbehavior, and large class size. They found the research very limited with regard to special educators. Questions remain, therefore, as to whether other job-related sources of stress apply to educators of exceptional students.

To investigate the magnitude of burnout among teachers in San Diego, a structured questionnaire and inventory including the concepts of morale, stress, and worker alienation were mailed to 750 elementary and secondary teachers (Colasurdo, 1981). Results of the study indicated that 16 percent of the 215 respondents were rated burned out, while nearly 52 percent were burned out or reported frequent feelings of burnout. More teachers in the 30 to 39 age group reported frequent feelings of burn-out. In terms of adult development, this may represent a time period when individuals typically experience unrest, disillusionment, and doubts about career choices. Results from this investigation indicated that burnout is more related to self-expectations than to extrinsic conditions. The conclusion was drawn that burnout is a real problem facing educators today.

MacKenzie (1981) administered a burnout inventory to 358 teachers, counselors, and administrators to assess the intensity of burnout in education. One aspect of interpersonal relations, social support, has been hypothesized to be an effective defense against burnout. The teachers in this study reported experiencing fairly intense feelings of emotional exhaustion, yet they did not report utilizing the support networks available to them. Based on the results of the study, it was suggested that preservice and inservice programs dealing with stress and burnout be developed, that a mentor system be initiated for new teachers, and that building-level support networks for teachers be organized.

After administration of two inventories (one to measure stress, the other to assess alienation) to 181 classroom teachers and two Q-Sorts to 30 of those teachers, the following conclusions were advanced. First, many teachers suffer from serious occupational dissatisfaction and alienation (80 percent of the sample population). Second, stress and burnout are evenly distributed across levels of instruction (elementary, junior high, and senior high). Third, no teachers in the study reported that any significant remediation efforts were being undertaken in their school district. Fourth, by ignoring the condition, school districts are underutilizing the potential of their teachers (Amodio, 1981).

Unfortunately, there is little likelihood that the amount of stress currently experineced by most teachers will decrease in the near future.

On the contrary, public-school teachers will likely be under more stress with fewer rewards during the next several years. Teachers will continue to be criticized for what the public perceives to be low student performance scores, violence and disobedience in the schools, lack of relevance in the curriculum, and general teacher incompetence. At the same time, burnout, the end result of unresolved stress, will likely increase at a high rate. Researchers have found it to be no respector of age, sex, or level of training (Coates & Thoresen, 1976, p. 3).

Burnout in Special Education

While burnout exists throughout the educational system, it has been suggested that the rate of attrition and burnout among special educators is higher than that of the general educational population (Siantz, 1980). Special educators, whose daily contact with and responsibility for students with handicaps places a disproportionate amount of stress upon them, have been said to be particularly susceptible (Zabel & Zabel,

1981). "Special education teachers are generally absent more, are less satisifed with their jobs, are more stressful, and are more externally oriented than regular education teachers" (Knowles, 1980, p. 525).

Weiskopf (1980) wrote that "teachers in general and special educators in particular are burning out on the job" (p. 18). Burnout extends beyond the teacher by also affecting students, staff, parents, and the teacher's family. Consequently, Weiskopf recommended that teachers be helped to understand the burnout syndrome, its causes, symptoms, preventions, and remedies.

One explanation for the higher incidence of burnout among special educators compared to regular classroom teachers may be the short supply of special education teachers. "To maintain adequate special education classes for the nation's several million children with identified handicaps would require 500,000 teachers with special education certification; we have only 175,000 with little likelihood that the shortage will be met in the foreseeable future" (Smith, 1977, p. 4). These figures do not account for expansion. Thus, colleges are required to produce 12 special education teachers every year for every 100 now practicing (Reynolds & Birch, 1977). Further, a recent study by Emporia State University in Emporia, Kansas identified 314 special education vacancies among 304 Kansas school districts. Furthermore, about half of the special education teachers in Kansas are only provisionally certified (Adams, 1981).

A high turnover rate means increased administrative time and effort spent in recruiting, hiring, and training new teachers (Dixon et al., 1980). In 1979 the NEA estimated the attrition rate for public school teachers in general to be 5.9 percent. It is predicted that attrition

and burnout rates for special education teachers would exceed NEA's estimate. Skinner (Note 8), for example, reported an average "life" span of five years for special education teachers and 11½ years for regular educators. Data from Siantz's (1980) survey of special education teachers who received their master's degrees from the University of Kansas between 1970 and 1979 revealed an attrition rate of 25 percent. Over one half of the teachers who had left their jobs were considered burned out according to her criteria. Schrag (Note 9) reported that an average of 46 percent of the special education teachers in Idaho left after one or two years of teaching.

The National Rural Research Project (NRP) found that retention and recruitment of special education teachers were problems in 94 percent of the 19 states surveyed. These findings have been corroborated at the local level in over 80 districts across the nation (Helge, Note 5). According to Helge, the high rate of teacher burnout was frequently attributed to inadequate staff development.

If the right to a free appropriate education for all handicapped children is to become a reality in our schools, we must continue to recruit, train, and retain competent and dedicated teachers. This goal is frustrated each time we fail to retain those who have devoted their careers to the instruction of handicapped children. When one begins to investigate the topic of burnout and its ramifications for the entire field of education, the results are disheartening. To date, no definition of the concept has been generally accepted and no framework exists for creating strategies to prevent and remedy burnout. It seems there are not enough reinforcers in education to maintain the ethic of devotion and service. Too often, teachers are faced with poor or nonexistive

career ladders, high teacher-student ratios, reduced budgets, salaries which do not stay even with inflation, and administrators who regard them as expendable.

One study conducted recently in Kansas (Zabel & Zabel, 1981) involving 601 special education teachers found that teachers at the junior-high level were at greatest risk for burnout. The teachers of emotionally disturbed (ED) students reported the greatest occupational stress levels. Consulting teachers reported to experience the highest levels of stress, which may be associated with their role of serving large geographical areas and numbers of students while meeting the high expectations of others. Zabel and Zabel reported that number of students, length of work week, and opportunities for time away from students were not significantly related to burnout; instead, age and teaching experience were found to be important factors. The older the teachers, the less emotional exhaustion and depersonalization were noted accompanied by a greater sense of personal accomplishment. It is unclear whether older, more experienced teachers have developed better skills, coping strategies, and more realistic expectations, or if those teachers who have experienced great job-related stress have left the profession and, thus, were not included in the survey. Low levels of support from administrators, fellow teachers, and parents were significantly correlated with the burnout measures. From the above data it appears that burnout is prevalent among teachers of exceptional children. However, the authors warned that the term itself is probably misleading by implying that a person either is or is not burned out. In most cases, burnout is a matter of degree. Yet, as a group, teachers of exceptional children were not found to be particularly emotionally exhausted, nor to be

experiencing high levels of depersonalization. Rather, they often reported high levels of personal accomplishment.

Zabel and Zabel's conclusion that working with ED students is more demanding, stressful, and nonrewarding than working with other students was supported in a study by Grosenick and Huntze (Note 10). Furthermore, Lawrenson and McKinnon (Note 11) lent support to the findings that the external factors of administrative support, inconsistent support staff, lack of recognition for a job well done, and parental contact are stressful. These variables were among the most frequently cited sources of job dissatisfaction by teachers of emotionally disabled students in the study.

Shaw, Bensky, and Dixon (1981) expressed concern over the limited information currently available on special educator burnout. They expressed a critical need for focusing on special education burnout due to the inherent pressures in the field over and above general societal and educational stressors. Societal stressors included lack of respect for authority and institutions, disintegration of traditional family structures, economic problems such as recession, inflation, and limited resources. Educational stressors included increased school violence, low salaries, changing school populations, and vandalism. Beyond these come the stressors specifically associated with handicapped students (i.e., physical, mental, emotional, and social problems), and stressors inherent in P.L. 94-142 such as team meetings, due-process paper work, IEP's, intensive involvement with parents, and accountability. All these pressures create stressful conditions with which increasing numbers of special educators are unable to cope.

Summary

The purpose of this chapter was to present and discuss the concept of stress and to review the literature and research relative to job-related stress and burnout specifically in the areas of regular education and special education. The literature depicts teaching as a stressful job that may contribute to teacher anxiety, job dissatisfaction, low morale, high absenteeism, teacher burnout, and increasing resignations. In turn, these variables may disrupt the learning program of students. In spite of the magnitude of the problem, the literature reports relatively little empirically based research in the area of educational stress and burnout.

CHAPTER III

METHODOLOGY

The purpose of this study was to identify and analyze the variables associated with stress and burnout among regular and special educators in the midwest. The collection and subsequent analysis of information about stress in education will provide needed, up-to-date data in this area and serve as a basis for the development of a preservice and inservice training network for educators. Furthermore, such information is crucial for both State Departments of Education and the United States Department of Education. For this reason, the study outlined in this chapter was financially supported by the Office of Special Education Rehabilitation Services, Special Education Programs, Division of Innovations and Development. In addition, State Departments of Education from four midwestern states (Iowa, Kansas, Missouri, and Nebraska) cooperated in this effort.

This chapter presents a description of the instruments, subjects, and specific procedures used to investigate the research questions stated in Chapter I.

Procedures

Through survey research techniques, basic information about stress in education is directly obtainable. Experiences and opinions of special education and regular education teachers in a four-state region were gathered during the following phases of the investigation:

1. Survey special education directors throughout the nation to determine their interest in and involvement with the topic of stress in education.

2. Meet with and interview personnel from four selected State Departments of Special Education to solicit their participation in this study.
3. Develop and field test the interview questionnaire to be used.
4. Obtain a random sample of special education and regular education teachers to be interviewed.
5. Contact randomly selected teachers by mail and seek their participation in the study.
6. Conduct telephone interviews with those teachers who agree in writing to participate.

Preliminary Survey

A preliminary survey of the 50 state directors of special education was executed to assess research needs across the country regarding stress and burnout in education. A letter, a one-page questionnaire, and a stamped, addressed envelope were mailed to each director of special education. (See Appendix A for a copy of the survey letter and questionnaire). Directors were questioned regarding their state's efforts to study special education teacher burnout. In addition, they were asked to indicate their concern with this problem and whether they would be interested in a study on the issue.

State Participation

During the proposal stage, four midwestern states--Iowa, Kansas, Missouri, and Nebraska--were arbitrarily chosen for inclusion. Approval to conduct the investigation was requested from the director of special education in each of the selected states. Also, the purposes and procedures of the research were presented and discussed both by telephone and

by letter with state department personnel to assess the feasibility of securing a random sample of teachers. A representative from each of the four State Departments indicated, in writing, an interest in the project and agreed to participate (see Appendix B).

Once written support had been obtained, the specifics related to execution of the study were presented to the University of Kansas Advisory Committee on Human Experimentation. The Committee found the study to be safe for subject participation (see Appendix C).

Instrument Development

After a thorough review of the literature on stress and consultation with experts in the area of stress in education, an 11-page questionnaire was developed, field tested, and subsequently revised (see Appendix D).

Because it was theorized that the perceived level of stress associated with teaching as well as teachers' reactions to stress are determined by their adaptive capacity and appraisal system, the instrument was designed to elicit self-reported data in the following general areas.

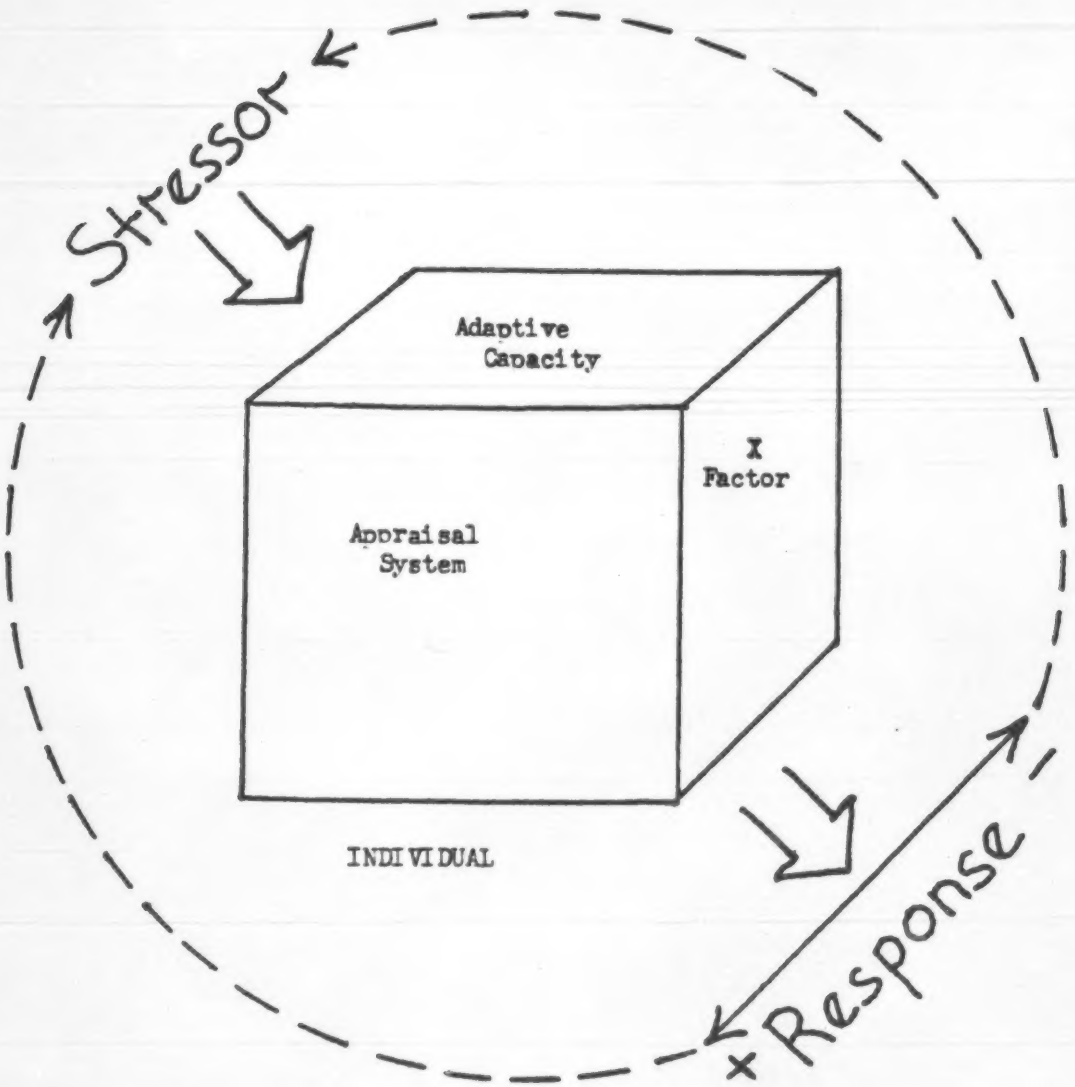
Self-reported data. Self-reported data have been widely employed as a means of obtaining information about a person's inner feelings, that are otherwise difficult to identify. Use of self-reporting in this study was based on the assumption that teachers would provide valid and subjective appraisal of their circumstances. To obtain some measure of the reliability of special education teachers' self-reported data, Knowles (1980) checked self-reported absentee rate against actual absentee rate for 10 percent of his sample. The resulting reliability quotient was .89.

Stress model. A theoretical stress model was developed to help visualize and test the concept of stress in education (see Figure 1). An individual's perception of and subsequent reaction to stress were thought to be dependent partly on at least two factors. The first, adaptive capacity, was defined as (a) possessing "healthy" personality variables, (b) having experienced few recent personal life adjustments, (c) possessing internal coping skills, and (d) having external supports at one's disposal. Based on this model, degree of vulnerability to stressors is indicated by one's ability to adapt. The second factor, appraisal system, was described as one's perception of commonly reported stressors. Additional variables which may affect an individual's perception and response to stress were labeled as the "X Factor." When an individual encounters a stressor, it is hypothesized that he/she appraises it, adapts or succumbs to it, and reacts to it in either a positive or a negative manner. As depicted in the model, this reaction, whether positive or negative, affects the intensity and duration of the original stressor. It has been further hypothesized that individuals who report having a high degree of adaptability, which enables them to resist the debilitating effects of stress, will also report (a) fewer psychological and physiological symptoms of stress and (b) positive ways of responding when under stress.

The above stress model served as the basis for the data collection instrument. A detailed description of the interview questionnaire follows.

Demographic data. Information regarding attrition was collected in Part A of the questionnaire. Participants who reported having left classroom teaching were asked when and why they left teaching. In addition, these individuals were asked to indicate their present occupation.

Figure 1


Stressor
Adaptive Capacity
X Factor
Appraisal System
INDIVIDUAL
+Response

Next, questions requesting demographic data in the following 10 areas were included in Part B of the instrument. For all teachers:

1. Level - elementary/secondary
2. Type of school district - urban/rural/suburban
3. Years of teaching experience
4. Age
5. Level of educational training
6. Marital status
7. Sex

For special education teachers:

8. Service delivery model
9. Area of special education
10. Type of supervision

Part C of the questionnaire was comprised of four questions to be presented only to female teachers. Specifically, these questions covered childcare, cooking, and housekeeping responsibilities. Respondents were asked, "Are childcare and/or housekeeping responsibilities while teaching full time a source of stress to you?" Participants responding "sometimes," "often," or "frequently" were subsequently asked to assign a percentage of such stress to the following three areas: teaching-related duties, household duties, and childcare responsibilities.

Stress Prone Personality Inventory. To gain information about a teacher's adaptive capacity, the Stress Prone Personality Inventory, developed by staff at the St. Louis University Medical Center (Department of Health Promotion, Note 12) and used with their permission, was included as Part D of the interview instrument. Eight of the items included in the inventory, such as "Get angry enough to hit things" and

"Talk loud and fast," are said to be indicative of the Type A personality described by Friedman and Rosenman (1974). After observing the behavior patterns of thousands of patients, these authors characterized the Type A person as struggling to achieve more and more in less time. Thus, Type A persons assume more responsibilties than are expected of them. They are intensely impatient, are too busy for rest and leisure, and are rapid speakers. Consequently, more than others, Type A persons are prone to stress-related diseases.

The remainder of the inventory consisted of another set of eight items, such as "React to problems in an easy-going manner," and "Work at an unhurried, steady pace," which are representative of Friedman and Rosenman's (1974) Type B personality. Type B individuals are the opposite of Type A individuals. Because they tend to be less concerned about their status in relation to others, Type B persons are not motivated to work constantly to achieve more and more. As a result, they have time for relaxation, are good listeners, and are satisfied with their current status.

During the interview, teachers were asked to compare themselves with others and to decide how well each item from the Stress Prone Personality Inventory described their own way of doing things. "Almost never," "rarely," "sometimes," "often," and "almost always" were offered as possible responses. Responses were assigned from one to five points, resulting in a range of 16 to 80 total points. Low total scores (16 to 37 points) indicated a high degree of vulnerability to the adverse effects of stress, while high scores (60 to 80 points) reflected low vulnerability.

Life Experience Stress Level. A person's psychological level of stress is related to the extent to which he/she adapts to changing life events. Holmes and his colleagues (Holmes & Rahe, 1967; Masuda & Holmes, 1967) summarized research showing mental and physical well-being to be determined by the occurrence of certain life events within the past 12 months. A short adaptation of their Social Readjustment Scale was developed and included as the Life Experience Stress Level (LESL) scale constituting Part E of the questionnaire. Ten life events judged to be the most stressful and carrying the highest numerical stress value on the Social Readjustment Scale were verbally presented to each interviewee preceded by the question, "Have any of the following events occurred in your life in the past 12 months?" Using the Social Readjustment Scale as a guide, weighted values in multiples of five were arbitrarily assigned to each of the 10 events, ranging from 25 points for "Change in living conditions or residence" to 100 points for "Death of a spouse." Thus, the more stressful life events occurring over the past year, the higher the LESL total score.

Internal Coping Skills. The 12 items included in Part F of the questionnaire were designed to assess the extent to which respondents believe outcomes in life are shaped by their own behavior (internal control), rather than by luck or external factors (external control). Internal control, viewed as the healthier of the two, manifests itself in the belief that events result from personal action rather than fate and that, consequently, such events can be influenced. Using Rotter's (1966) internal-external locus of control scale, Kyriacou and Sutcliffe (1979a) found 130 teachers' self-reported occupational stress to be positively associated with their belief in external control over events.

On the Internal Coping Skills (ICS) section of the questionnaire, therefore, teachers were asked, "How often is this statement true for you--often, sometimes, or rarely?" Six of the stimulus statements were indicative of an internally controlled individual. On those items, respondents were assigned three points if they responded "often," two points if their response was "sometimes," and one point when their response was "rarely." Six additional statements, including "Fate is a major determinant of happiness," were more characteristic of externally controlled individuals. For those six items, the scoring was reversed. That is, an "often" response was assigned one point, "sometimes" earned two points, while "rarely" was worth three points. The maximum score possible on this scale, therefore, was 36 points, with 12 as the minimum, assuming all items were answered. The higher the score, the more internal the respondent.

External Supports. The External Supports (ES) section of the questionnaire (Part G) was constructed similarly to the previous scale--Internal Coping Skills. Once again, respondents were asked, "How often is the following statement true for you...?" On this scale, teachers were given the option of responding "often," "sometimes," "rarely," or "not applicable." It is hypothesized that those teachers who have external supports--family members, colleagues, administrators--at their disposal will possess a stronger adaptive capacity and, therefore, report both to experience fewer stress-related symptoms and to respond to stress in a more positive way. The effects of distressing conditions at home and/or at work have been emphasized by Selye (1976).

On the ES portion of the instrument, 11 of the stimulus statements were designed to assess the presence of external supports; for example,

"I see staff members from my building socially." Subjects who responded "often" to any of these 11 items were assigned three points. Those who said "sometimes" were given two points. If "rarely" was the response, one point was allowed, while "not applicable" earned no points. One item, "Teacher's safety is physically threatened by students in my school," was scored in the reverse manner. The range of possible scores was 0 to 36 points. The higher the score, the more external supports were available to the respondent.

Perception of Stressors. In order to get an indication of an individual's perception of commonly reported stressors, Part H, Perception of Stressors (POS), was designed.

A list of 16 frequently reported stressors extracted from a review of the literature on educational stress was presented accompanied by the directions: "The following list of items has been said to be related to stress. According to your personal experience as a teacher, how do you rate these factors?" Respondents were asked to assign the ratings "extremely stressful," "moderately stressful," or "slightly stressful" to such items as "Discipline and classroom management." Factors judged "extremely stressful" were assigned three points. "Moderately stressful" responses earned two points, and responses of "slightly stressful" were worth one point. On this scale, scores ranged from 16 to 48 points. Individuals who appraised teaching as "extremely stressful" were most likely to receive a high score on this scale.

Part I, Level of Perceived Control, was eliminated during the field test phase of the study.

Environmental Stressors. In order to determine the most frequently reported stressors, Part J, Environmental Stressors (ES), was included.

Teachers were asked, "What factors or conditions within your work environment cause or have caused you distress?" Please specify the top two conditions that you've experienced placing the most stressful first." Responses to this question were written as accurately and completely as possible, so that answers could later be categorized.

Part K, Personal Stressors, was eliminated during the field test phase of the study.

Psychological and Physiological Symptoms. Stress among teachers has been defined as:

> a response syndrome of negative effects (such as anger or depression) usually accompanied by potentially pathogenic physiological changes (such as increased heart rate) resulting from aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitute a threat to his self esteem or well-being and by coping mechanisms activated to reduce the perceived threat. (Kyriacou & Sutcliffe, 1979b, p. 89)

Consequently, two scales, Psychological Symptoms (PSY), Part L and Physiological Symptoms (PHY), Part M, were developed. To better evaluate the relative frequency as well as the existence of each of the 13 commonly reported psychological and 12 commonly reported physiological symptoms of stress listed, teachers were asked to estimate how frequently during the school year they felt in these ways about work in general (PSY); or how frequently during the school year they experienced any of the listed symptoms as a result of their job (PHY). Response options included "never," "rarely," "about once a week," "about once a day," and "many times a day." Numerical values assigned to each response ranged from

one point for "rarely" to four points for "many times a day." On the PSY scale points ranged from 13 to 52 points, while the total number of points possible on the PHY scale ranged from 0 to 48 with an additional response of "never" worth no points. Thus, on these two scales, high levels and frequencies of stress symptoms reported were reflected in high total scores.

Reactions to Stress. Current information on stress management as reported in educational and psychological journals was examined to identify the 21 coping strategies included in Part N, Reactions to Stress (RS).

On the RS scale teachers were asked to estimate how frequently they used any of the listed coping strategies when under stress. Subsequently, all 21 stimulus items were read. Eleven items, such as "Exercise", "Seek comfort in religious practices", and "Practice coping self-talk", usually considered to be positive reactions to stressful situations, were included. "Have alcoholic beverages to relax" and "Fall apart" were among the 10 additional items considered negative or less productive reactions to stress. Teachers were asked to respond "often", "sometimes", "rarely", or "never" to each item. Ratings were assigned a point value ranging from three for "often" to 0 for "never." This scale yielded a possible range of 0 to 63 points. The greater the frequency of reporting to choose positive reactions when under stress, the higher the scale score.

Absenteeism. Three indices--job satisfaction, absenteeism, and intention to leave--have been cited as correlates of teacher stress (Chandler, 1975; Price, 1970). To gather data on the second of these, Part O, Absenteeism, included seven questions tapping this area. In

addition to being asked how many days they were absent from school last year, teachers were questioned regarding sick-leave policies and available incentives for perfect attendance. Subjects were also asked if they ever called in sick due to stress, and if so, approximately how many days per year. Finally, as an indicator of extreme stress or burnout, subjects were asked if they dreaded having to go to work each day.

Burnout syndrome. In the final portion of the interview instrument, Part P, Burnout Syndrome, teachers were asked whether they considered themselves burned out according to the following definition (Maslach 1978b): Emotional exhaustion resulting from the stress of interpersonal contact (including low morale, high absenteeism, and loss of positive feelings, sympathy, and respect for students). Three responses--"yes", "no", and "getting there"--were offered. Those who answered "yes" or "getting there" were asked to respond to the question "What is the main reason you are still teaching?"

Seven additional items, inspired by a nationwide survey conducted every five years by the National Educational Association (NEA), were also included in this section of the questionnaire (Toch, 1982). First, respondents were asked if they planned to teach until retirement. Subjects who indicated that they did not, were asked the following three questions: "Do you plan to stay in the field of education?" "What do you plan to be doing next year?" and "What do you plan to be doing three years from now?" All teachers were asked (a) whether they would encourage a son or daughter to begin a career in education, and (b) given a second chance, if they would re-enter the teaching field. To ascertain whether or not teachers felt free to make a career change subjects were asked if they felt they could switch careers at this point in life.

To conclude the questioning and to provide a measure of relief, the final item of the questionnaire read, "Do you feel burned out as a result of this interview?"

Preparatory Procedures

In order to scrutinize the interview questionnaire and improve its validity, it was submitted to both a panel of experts and a field test. Subsequently, considerable effort was devoted to locating and amending any inconsistency or ambiguity. For example, as a result of these efforts, two sections (Level of Perceived Control, Part I, and Personal Stressors, Park K) were deleted in order to shorten the interview time to approximately 20 minutes.

The Telephone Interview

Studies of teacher stress and burnout in special education are limited. Furthermore, of those reported in the literature none has employed the telephone interview technique for data collection. The interview technique employed in this study offered the following advantages compared to the use of mailed, paper-and-pencil questionnaires.

1. Respondents had the opportunity to seek clarification when necessary.
2. Branching to followup questions and omission of nonapplicable items was efficiently conducted.
3. Risk of items being inadvertently or purposefully omitted and questionnaires being returned incomplete was virtually eliminated.
4. Response rate to a scheduled telephone interview was most likely increased.
5. Verbal, two-way communication over the telephone offered a personal approach with the added assurance of privacy.

6. Utilization of only the auditory mode of communication was conducive to direct, spontaneous responses and opinions.
7. Results of the telephone interview were more objective than face-to-face interviews since the personal appearance of the interviewer and the setting were irrelevant.
8. Features of the instrument such as number of pages, size of print, and scoring criteria did not influence or threaten the respondent.
9. The tendency to delay or fail to complete and return the questionnaire was diminished.
10. A high level of trust and rapport, not directly measurable, but inferred through teachers' spontaneous comments, was established.

Panel of experts. The initial instrument was submitted for evaluation by four nationally known experts who had conducted and published research on stress and burnout in education. Also, three of the University of Kansas faculty members in the Special Education Department were asked to critique the questionnaire. All seven individuals reviewed and returned the instrument within one month. Consultation regarding suggested changes was conducted in person, over the telephone, and in writing. As a result, revisions were made both in content and format.

Field test. During the month of February, 1982, the revised questionnaire was used to conduct four telephone and four face-to-face interviews as a means of field testing the instrument. As a result, the following was accomplished:

1. An accurate estimate of interview time was obtained (20 minutes).
2. A standard interview script was finalized.

3. Audio recordings were made to be used for checking scorer reliability.
4. The interviewer's proficiency and fluency during the interview process were improved.
5. Items which might be considered embarrassing or harmful to respondents were identified, eliminated, or revised.

Eventually, the researcher concluded that the revised and field-tested survey instrument was sufficiently valid for data collection from sample groups in Iowa, Kansas, Missouri, and Nebraska. Therefore, the questionnaire and script were typed and duplicated.

Interview script. In order to ensure an efficient, consistent, and valid method of data collection, a script was written and typed directly on the interview questionnaire (see Appendix D). When the respondent had been contacted by telephone, the interviewer introduced herself and explained the purpose of the call as written in the script. After stating that the interview was scheduled to take about 20 minutes and asking if the participant had been reached at a convenient time, the researcher proceeded with the interview.

Before demographic data were collected, subjects were advised that (a) their responses would be averaged with those of approximately 200 other teachers included in the study, and (c) they were to feel free not to respond to any item which they considered too personal. Although the interviewer did not initiate conversation, respondents' informal comments were recorded when possible, and the interviewer answered all questions.

Following the final question of the interview, the interviewer thanked respondents for sharing their experiences. If subjects wished to receive a summary of the results of the study, a mailing address was noted.

Interviewer consistency. In order to accomplish the task of interviewing several hundred teachers within the given time frame, a graduate student was hired to assist in the data collection process. Prior to any actual interviewing experience, the research assistant worked with the investigator for three, two-hour practice sessions. During two additional practice sessions the assistant scored audio tapes made during the field-test interviews. Reliability was determined by computing percent of agreement on the total questionnaire. When compared with the investigator's original scoring of the field-test interviews, an average scorer reliability quotient of .97 was obtained.

In March, 1982 the returned consent postcards were randomly divided between the investigator and the research assistant prior to the interviews. Although the majority of the interviews were conducted in separate settings, almost daily telephone consultation was maintained between the two interviewers during the three-month data collection stage. Overall, careful attention was paid to (a) reading the script exactly as written, (b) following the prescribed sequence of the subparts and items within them, (c) avoiding any casual comments or inflectional voice changes which might affect the neutrality of the interview, (d) learning and using the teacher's first name throughout the interview, and (e) maintaining a courteous and appreciative attitude toward each respondent. The investigator supervised the initial three telephone interviews conducted by the research assistant. After completing the training stage, the research assistant conducted 73 additional telephone interviews from March through May, 1982.

Subjects

A total of 200 certified teachers from Iowa, Kansas, Missouri, and Nebraska participated in the study.

Iowa and Kansas sample. A randomly selected sample of 75 special education teachers and 50 regular education teachers from Iowa and Kansas were included. From the State Department of Education files of all teachers certified and teaching special education during the 1980-81 school year, a printout was obtained listing a random sample of 75 teachers' names along with their assigned schools and school addresses. Criteria used to describe the sample included: (a) state certification in any area of special education, and (b) classroom teaching rather than school administration or supervision experience. A random sample of 50 teachers certified and teaching in regular education was drawn in the same fashion using similar criteria. All samples were drawn without replacement.

Nebraska sample. At the suggestion of Nebraska's director of data processing, a random sample of 75 special education educators and 50 regular educators was drawn using the 1980-81 Nebraska Educational Directory. As in Iowa and Kansas, teachers included in the Nebraska sample (a) held state certificates in either special education or regular education, or both, and (b) were considered classroom teachers.

Missouri sample. Because neither a computer-based data file of certified Missouri teachers, nor a state-published directory of teachers was available for this study, subjects from the state of Missouri were randomly selected at the school district level. Teachers from five Missouri school districts (Kansas City, Missouri School District, Parkway School District, Chesterfield, Mo., North Kansas City, Missouri School District, Raytown Consolidated School District No. 2, and Belton, Missouri School District) were included. Forty special educators and 40 regular educators were randomly selected from the 1980-81 lists of all employed teachers in the above Missouri school districts.

Initial Contact

Because it was impossible to obtain teachers' telephone numbers or home addresses from state education agencies, the randomly selected teachers were first introduced to the study by means of a flyer mailed to their assigned school (see Appendix E for a sample). Since teachers were being asked to voluntarily submit their telephone numbers, an attempt was made to design a flyer that would insure a high degree of teacher response. Thus, the following features were incorporated:

1. The flyer was printed on bright orange paper to minimize the chance that it would go unnoticed.
2. A bonus was offered to those who returned the enclosed postcard (see Appendix E). That is, 10 postcards were randomly drawn from a total of 214. The winners received by mail a complimentary handbook or activity book along with a personal thank-you letter.
3. Rather than presenting the study in a formal manner, an attempt was made to appeal to potential respondents at a more personal level.

Respondents were requested to indicate their preferences concerning where and when to be contacted for an interview. In an attempt to reach those who were no longer teaching or not in the building to which the flyer was mailed, each envelope was stamped "Please Forward." A total of 455 envelopes were mailed on February 15, 1982--125 to teachers in the state of Iowa, 125 to teachers in Kansas, 125 to Nebraskan teachers, and 80 to Missouri teachers.

Rate of Return

At the completion of the data collection on June 1, 1982, 214 signed postcards had been returned in addition to two unopened letters --one from Kansas and one from Missouri--resulting in a 47 percent return rate (see Table 1). Of the 214 teachers who had completed and returned their postcards, 200 were contacted and interviewed over the telephone. At least five unsuccessful attempts were made to contact each of the 14 additional respondents. Thus, four respondents were not interviewed due to changed or incorrect telephone numbers, eight were contacted at an inconvenient time or did not answer after five or more attempts, and two teachers refused to participate when telephoned.

Processing of Interviews

After June 1, 1982, all responses to the telephone interviews were coded and formatted for the purposes of key punching and statistical analysis. To insure confidentiality, all names, addresses, and telephone numbers were removed from the data and replaced with identification numbers. The data were programmed at the University of Kansas Computer Center and the results were analyzed from the printouts. A .01 significance level was adopted.

Statistical Procedures

The subjects' responses were formatted for the purpose of key punching and statistical analysis through the use of the Statistical Package for the Social Sciences (SPSS) (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975).

In order to statistically evaluate data collected from regular education teachers and special education teachers on each of the eight scales (Questions 1, 2, 3, 4, 5, 6, 7, and 8), their mean absence rates

Table 1

Summary of Survey Participants

	Iowa		Kansas		Missouri		Nebraska		Total
	SpEd	Reg.	SpEd	Reg.	SpEd	Reg.	SpEd	Reg.	
No. of letters mailed	75	50	75	50*	40	40*	7	50	455
No. of letters returned	52		49		46		67		214
Rate of return	.42		.40		.58		.47		.47
No. of subjects who could not be contacted	2		2		2		6		12
No. of subjects who refused to participate							2		2
No. of subjects interviewed	50		47		44		59		200

*1 letter was returned unopened

(Question 9), and their incidence of calling in sick due to stress (Question 13), the t-test between two independent means was employed. Differences between the stress-related behaviors reported by regular education teachers and special education teachers were statistically evaluated through the use of Yates corrected chi-square (x^2) test (Question 10). Rank orders and frequency distributions of work-related stressors reported by the subjects collectively and by teaching area were prepared (Question 11). To determine differences between the degree of stress perceived by regular and special educators on the 16 work-related stressors (Question 12), mean scores and rank orders by groups were calculated. A comparison of teachers who reported to be burned out with those who did not on multiple variables was conducted using Hotelling's T^2 (Winer, 1971). Evaluation of the two groups of teachers singly using a t-test between the means was also calculated (Question 14). A stepwise multiple-regression was utilized to evaluate which demographic variables or scale scores, if any, contributed significantly to a prediction of those teachers who reported to be burned out (Question 15). Frequency tables were employed to investigate what teachers not planning to teach until retirement hoped to be doing next year and in three years (Question 16) and the reasons teachers continued to teach in spite of reported feelings of being burned out (Question 17). Finally, calculations were made to determine what proportion of female teachers reported that cooking, housekeeping, and childcare duties in addition to full-time teaching were a source of stress (Question 18).

Summary

This study included a total of 200 public-school teachers: 116 special education teachers and a comparison group consisting of 84 regular education teachers. All subjects were interviewed over the telephone in order to assess demographic data and responses to the following eight scales: Stress Prone Personality Inventory, Life Experience Stress Level, Internal Coping Skills, External Supports, Perception of Stressors, Psychological Symptoms, Physiological Symptoms and Reactions to Stress. The data were tested for statistical significance, a .01 level of significance was adopted.

CHAPTER IV

RESULTS

The purpose of this chapter was to present and interpret the results from the data analysis. In particular, the focus was on the self-reported data obtained from 200 teacher interviews regarding stress in education. A major component of the investigation consisted of a comparison between the responses of special education teachers and those of regular education teachers. Data included demographic variables, teacher scores on eight scales (Stress Prone Personality Inventory, Life Experience Stress Level, Internal Coping Skills, External Supports, Perception of Stressors, Psychological Symptoms, Physiological Symptoms, and Reactions to Stress) developed specifically for this study, and respondents' opinions regarding stress-related behaviors such as absenteeism and burnout.

Preliminary Survey

State and local school administrators are increasingly becoming concerned with the issue of stress in education. In a preliminary survey of directors of special education across the nation, only five of the 37 respondents (74 percent return rate) indicated that some effort was under way in their state to study burnout among special education teachers. (See Appendix A for a copy of the survey letter and questionnaire.) However, 26 of the 37 individuals who returned the short questionnaire responded that special education burnout was a concern to them, and that they would be interested in a study related to this issue. This interest, together with the lack of empirically based research regarding stress and burnout in special education, prompted the present investigation.

Description of the Subjects

When the data collection was completed on June 1, 1982, 214 signed postcards and two unopened letters had been returned, resulting in an overall response rate of 47 percent. As described in Chapter III, 200 midwestern teachers were subsequently contacted and interviewed over the telephone to collect data on stress and burnout.

Of those interviewed, 84 were regular education teachers and 116 were special education teachers, representing responses of 42 percent and 58 percent, respectively. A further breakdown of the demographic characteristics of the sample is summarized in Table 2.

Although the randomly selected sample of teachers' names was derived from state lists of all assigned teachers for the 1980-81 school year, nine (5 percent) of the 200 teachers were no longer teaching by the time they were interviewed. Of the nine, two were from regular education and seven from special education. When questioned about their reason for leaving classroom teaching, the respondents gave the following reasons: (a) School counseling job opportunity (N=3), (b) School administration position (N=3), (c) Pregnancy (N=1), (d) Financial reasons (N=1), and (e) Burnout (N=1).

Description of Special Education Teachers

The 116 special education teachers were categorized according to three variables--area of special education, service delivery model, and type of supervision (see Table 3). Over half (N=65) taught either in the area of learning disabilities or in a noncategorical classroom which included learning disabled, emotionally disturbed, and educable mentally retarded students. In terms of delivery model, the sample group was equally divided between resource room (N=53) and self-contained settings

Table 2

Description of Subjects Collectively and by Area

Descriptor	Group		Special Education		Regular Education	
	N	Percentage	N	Percentage	N	Percentag
Subjects	200	100%	116	58%	84	42%
Sex						
Male	33	16.5%	11	9.5%	22	26.2%
Female	167	83.5%	105	90.5%	62	73.8%
Type of School District						
Urban	72	36%	52	44.8%	20	23.8%
Rural	53	26.5%	32	27.6%	21	25%
Suburban	75	37.5%	32	27.6%	43	51.2%
Marital Status						
Married	130	65%	72	62.1%	58	69.9%
Single	46	23%	30	25.9%	16	19.3%
Divorced	16	8%	9	7.8%	7	8.4%
Separated	4	2%	3	2.6%	1	1.2%
Widowed	3	1.5%	2	1.7%	1	1.2%
No Response	1	0.5%	0	0	1	
Educational Training						
Bachelor's Degree	92	46%	45	38.8%	47	56.6%
Master's Degree	97	48.5%	65	56%	32	38.6%
Ed. Specialist Degree	8	4%	5	4.3%	3	3.6%
Doctorate Degree	2	1%	1	.9%	1	1.2%
No Response	1	.5%	0	0	1	
Age						
Range	23 - 68		24 - 64		23 - 68	
Mean	37.7 years		37.5 years		38.5 years	
Median	35		35		35	
Mode	25		25, 29, 31		35	
Level Taught						
Preschool	7	3.5%	7	6%	0	0.
Elementary	118	59%	63	54.3%	55	65.5%
Middle School	10	5%	6	5.2%	4	4.8%
Jr. High	14	7%	8	6.9%	6	7.1%
Sr. High	33	16.5%	19	16.4%	14	16.7%
Jr. & Sr. High	7	3.5%	6	5.2%	5	6.0%
All Levels	11	5.5%	7	6%	0	0

Table 2
(Continued)

Years of Teaching Experience						
Range	1 - 34		1 - 22		1 - 34	
1 to 4 Years	93	46.5%	59	50.9%	34	40.5%
5 to 9 Years	61	30.5%	40	34.5%	21	25%
10 to 14 Years	22	11%	9	7.8%	13	15.5%
15 to 19 Years	11	5.5%	5	4.3%	6	7.1%
20 to 24 Years	2	1%	1	.9%	1	1.2%
25 to 29 Years	4	2%	0	0	4	4.8%
30 to 34 Years	2	1%	0	0	2	2.4%
No Response	5	2.5%	2	1.7%	3	3.6%

Table 3

Special Education Area, Service Delivery Model, and Type of Supervision Reported for Special Education Teachers

Area of Special Education	N	Percentage
Learning Disabilities	40	34.5%
Noncategorical (LD, ED, EMR)	25	21.5%
Educable Mentally Retarded	22	19%
Emotionally Disturbed	8	7%
Multiply-Severely Handicapped	5	4%
Deaf	3	2.5%
Early Childhood Special Education	3	2.5%
Gifted	2	2%
Hospital and Homebound	2	2%
Language Delayed	2	2%
Visually Handicapped	1	1%
Adapted Physical Education	1	1%
Service Delivery Model	**N**	**Percentage**
Self-Contained	52	44.8%
Resource	53	47.3%
Itinerant	7	6.3%
No Response	4	3.4%
Type of Supervision	**N**	**Percentage**
Principal	50	43.1%
Director of Special Education	21	18%
Both Principal & Director	26	22.4%
Other	17	14.6%
No Response	2	1.7%

(N=52). Most of the special educators reported that they were supervised by their principal (N=50).

Reliability of Scales

Reliability measures indicate the confidence that can be placed in the reproducibility of scores. Commonly employed reliability measures include: test-retest, parallel forms, split-half, and internal consistency methods. In many cases, such as in this investigation, only a single test administration is possible. Thus, the test-retest method of estimating reliability was impossible. Similarly, the absence of a parallel or equivalent form of each of the scales made it impractical to administer and correlate paired observations. The split-half method of reliability also had to be rejected for use in the present study since the various scales may be split in a number of ways, yielding many different values of r. Internal-consistency methods of estimating reliability are frequently employed with psychological tests. Therefore, the Kuder-Richardson (1937) formula, a method of obtaining reliability coefficients using test-item statistics, was selected.

> The Kuder-Richardson formula 20 is a measure of the internal consistency, or homogeneity, or scalability, of the test material . . . If the items on a test have high correlations with each other and are measures of much the same attribute, then the reliability coefficient will be high. If the intercorrelations are low, either because the items measure different attributes or because of the presence of error, then the reliability coefficient will be low.

> The Kuder-Richardson formula 20 may be applied to tests comprising items which elicit more than two categories of response. Personality and interest inventories and attitude scales frequently permit three or more response categories. (Ferguson, 1976, p. 429)
>
> A high reliability coefficient (.70 or higher) would mean that the test was accurately measuring some characteristic of the people taking it. Further, it would mean that the individual items on the test were producing similar patterns of responding in different people. Therefore, a high value would mean that the test items were homogeneous and, therefore, valid. (Bruning & Kintz, 1977, p. 213)

The Kuder-Richardson formula yielded reliability coefficients for the scales (see Table 4) along with mean total scores and standard deviations. The highest reliability coefficient, .82, was obtained for the Psychological Symptoms scale. Reliability coefficients for the following scales were also considered high: Perception of Stressors (.76), Physiological Symptoms (.73), and Stress Prone Personality Inventory (.72). Due to the nature of the items included in the Life Experience Stress Level scale, a reliability coefficient was not determined.

Reliability coefficients for the remaining scales ranged from low to moderate. Therefore, data collected using the eight scales described in Table 4 and in Chapter III were considered sufficiently reliable in the investigation of the 18 research questions.

Table 4

Means, Standard Deviations, and Reliability Coefficients for the Eight Scales

Scale	Number of Items	Mean Total Score	Standard Deviation	Reliability Coefficient
Stress Prone Personality Inventory	16	49.61	6.91	.72
Internal Coping Skills	12	29.71	3.15	.57
External Supports	12	28.68	5.76	.57
Perception of Stressors	16	27.40	5.36	.76
Psychological Symptoms	13	21.83	5.62	.82
Physiological Symptoms	12	11.37	4.66	.73
Reactions to Stress	21	41.22	5.30	.53

Results of the Investigation

The results related to each of the 18 research question were described as follows.

Question 1

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Stress Prone Personality Inventory, and when the two groups were categorized by:

1.1 sex

1.2 age

1.3 type of school district

1.4 educational training level

1.5 years of teaching experience

The test of Question 1 for the Stress Prone Personality Inventory (SPPI) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A significance level of .01 was adopted. The number of subjects, SPPI mean scores, and standard deviations for regular education and special education teachers, considered collectively and categorized by demographic variables, were summarized (see Table 5).

Question 1 (SPPI):

When the teachers were considered collectively, the regular education teachers (N=84) had a SPPI mean score of 3.05, as compared with 3.13 for the special education teachers (N=116). That is, the latter group was found to have a higher SPPI mean score than did regular education teachers (see Table 5). The t-test of the two groups' levels of stress prone personality yielded a t-value of -1.35 (df=198; N.S.) (see Table 6).

Question 1.1 (SPPI):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that male regular education teachers had the highest SPPI mean score (3.25), while male special education teachers had the lowest SPPI mean score (2.87) (see Table 5). The t-test of the male groups' levels of SPPI yielded a t-value of 2.41 (df = 31; N.S.), while the t-test of the female groups' levels of SPPI yielded a t-value of -2.72 (df = 165; p = 0.0073) (see Table 6).

Question 1.2 (SPPI):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the older special education teachers had the highest SPPI mean score (3.23), while the younger regular education teachers had the lowest mean score (2.94) (see Table 5). The t-test resulted in a t-value of -1.14 (df = 103; N.S.) for the younger groups of teachers and a t-value of -0.62 (df = 93; N.S.) for the older groups (see Table 6).

Question 1.3 (SPPI):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that the rural special education teachers had the highest SPPI mean score (3.17), while regular education teachers from suburban school districts had the lowest SPPI mean score (2.99) (see Table 5). The t-test of the levels of SPPI yielded the following t-values; -0.56 (df = 70; N.S.) for the urban group; -0.17 (df = 51; N.S.) for the rural group; and -1.18 (df = 73; N.S.) for the suburban group of regular and special education teachers (see Table 6).

Question 1.4 (SPPI):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N = 92) were considered as one group, while subjects with Master's (N = 97), Educational Specialist (N = 8), or Doctorate degrees (N = 2) constituted a second group. Inspection of the means indicated that the Master's-degree-and-above level special education teachers had the highest mean SPPI score (3.14) while the Bachelor's-level regular education teachers had the lowest mean SPPI score (2.99) (see Table 5). The t-test yielded a t-value of -1.24 (df = 90; N.S.) for the Bachelor's-degree level teachers and a t-value of -0.16 (df = 105; N.S.) for the Master's-degree-and-above level teachers (see Table 6).

Question 1.5 (SPPI):

The subjects' total teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the special education teachers with 9.5 to 40 years of career experience had the highest SPPI mean score (3.20) while regular education teachers with 1 to 9.5 years of experience had the lowest SPPI mean score (2.99) among the four pedagogical groups (see Table 5). The t-test yielded a t-value of -1.06 (df = 98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of -1.21 (df = 98; N.S.) for the more experienced teachers (9.5 to 40 years) (see Table 6).

Table 5

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by Stress Prone Personality Inventory

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	84	3.05	0.46	116	3.13	0.40
Sex						
Male	22	3.25	0.37	11	2.87	0.51
Female	62	2.98	0.47	105	3.16	0.38
Age Level						
Younger	44	2.94	0.49	61	3.03	0.37
Older	40	3.18	0.39	55	3.23	0.40
Type of District						
Urban	20	3.05	0.49	52	3.11	0.39
Rural	21	3.15	0.45	32	3.17	0.45
Suburban	43	2.99	0.45	32	3.11	0.38
Educational Training Level						
Bachelor's	47	2.99	0.46	45	3.11	0.45
Master's and Above	36	3.13	0.46	71	3.14	0.37
Experience Level						
1 - 9.5 years	35	2.99	0.44	65	3.07	0.34
9.5 - 40 years	49	3.09	0.47	51	3.20	0.46

Table 6

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by Stress Prone Personality Inventory

Source	df	t-Value	p
Total Sample	198	-1.35	N.S.
Sex			
Male	31	2.41	N.S.
Female	165	-2.72	0.0073
Age Level			
Younger	103	-1.14	N.S.
Older	93	-0.62	N.S.
Type of District			
Urban	70	-0.56	N.S.
Rural	51	-0.17	N.S.
Suburban	73	-1.18	N.S.
Educational Training Level			
Bachelor's	90	-1.24	N.S.
Master's and Above	105	-0.16	N.S.
Experience Level			
1 - 9.5 years	98	-1.06	N.S.
9.5 - 40 years	98	-1.21	N.S.

Question 2

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Life Experience Stress Level scale, and when the two groups were categorized by:

2.1 sex

2.2 age

2.3 type of school district

2.4 educational training level

2.5 years of teaching experience

The test of Question 2 for Life Experience Stress Level (LESL) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A .01 significance level was adopted. The number of subjects, LESL mean scores, and standard deviations for regular education and special education teachers, considered collectively and by demographic variables, were summarized (See Table 7).

Question 2 (LESL):

When the teachers were considered collectively, the regular education teachers (N = 84) had a LESL mean score of 61.25, as compared with 55.30 for the special education teachers (N = 116). That is, the regular education teachers were found to have a higher LESL mean score than did special education teachers (see Table 7). The t-test of the two groups' LESL levels yielded a t-value of 0.73 (df = 198; N.S.) (see Table 8).

Question 2.1 (LESL):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that male special education teachers had the highest LESL mean score (68.64), while male regular education teachers

had the lowest mean LESL score (44.55) (see Table 7). The t-test of the male groups' levels of LESL yielded a t-value of -1.34 (df = 31; N.S.). The t-test of the female groups' levels of LESL yielded a t-value of 1.42 (df = 165; N.S.) (see Table 8).

Question 2.2 (LESL):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the younger regular education teachers had the highest LESL mean score (63.89), while the older special education teachers had the lowest LESL mean score (53.39) (see Table 7). The t-test resulted in a t-value of 0.69 (df = 103; N.S.) for the younger groups of teachers and a t-value of 0.32 (df = 93; N.S.) for the older groups (see Table 8).

Question 2.3 (LESL):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that the urban regular education teachers had the highest LESL mean score (79.00), while regular education teachers from rural school districts had the lowest LESL mean score (48.81) (see Table 7). The t-test of the levels of LESL yielded the following t-values: 1.68 (df = 70; N.S.) for the urban group; -0.23 (df = 51; N.S.) for the rural group; and 0.04 (df = 73; N.S.) for the suburban group of regular and special education teachers (see Table 8).

Question 2.4 (LESL):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N =

92) were considered as one group, while subjects with Master's (N = 97), Educational Specialist (N = 8), or Doctorate degrees (N = 2) constituted a second group. Inspection of the means indicated that the Bachelor's-level regular education teachers had the highest mean LESL score (63.33) while Master's-degree-and-above level special education teachers had the lowest mean LESL score (55.07) (see Table 7). The t-test yielded a t-value of 0.66 (df = 90; N.S.) for the Bachelor's-degree level teachers and a t-value of 0.35 (df = 105; N.S.) for the Master's-degree-and-above level teachers (see Table 8).

Question 2.5 (LESL):

The subjects' total teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the regular education teachers with 1 to 9.5 years of career experience had the highest LESL mean score (64.00) while special education teachers with 1 to 9.5 years of experience had the lowest LESL mean score (52.54) among the four pedagogical groups (see Table 7). The t-test yielded a t-value of 1.08 (df = 98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of 0.04 (df = 98; N.S.) for the more experienced teachers (9.5 to 40 years) (see Table 8).

Table 7

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by Life Experience Stress Level

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	84	61.25	61.70	116	55.30	53.49
Sex						
Male	22	44.55	47.81	11	68.64	50.25
Female	62	67.18	65.25	105	53.90	53.86
Age Level						
Younger	44	63.89	59.77	61	56.69	47.94
Older	40	57.44	63.68	55	53.39	58.59
Type of District						
Urban	20	79.00	66.07	52	55.38	48.11
Rural	21	48.81	44.69	32	52.03	52.53
Suburban	43	59.07	66.07	32	58.44	63.45
Educational Training Level						
Bachelor's	47	63.33	59.39	45	55.67	52.23
Master's and Above	36	59.19	64.64	71	55.07	54.64
Experience Level						
1 - 9.5 years	35	64.00	54.22	65	52.54	48.55
9.5 - 40 years	49	59.29	67.02	51	58.82	59.51

Table 8

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by Life Experience Stress Level

Source	df	t Value	p
Total Sample	198	0.73	N.S.
Sex			
Male	31	-1.34	N.S.
Female	165	1.42	N.S.
Age Level			
Younger	103	0.69	N.S.
Older	93	0.32	N.S.
Type of District			
Urban	70	1.68	N.S.
Rural	51	-0.23	N.S.
Suburban	73	0.04	N.S.
Educational Training Level			
Bachelor's	90	0.66	N.S.
Master's and Above	105	0.35	N.S.
Experience Level			
1 - 9.5 years	98	1.08	N.S.
9.5 - 40 years	98	0.04	N.S.

Question 3

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Internal Coping Skills scale, and when the two groups were categorized by:

3.1 sex

3.2 age

3.3 type of school district

3.4 educational training level

3.5 years of teaching experience

The test of Question 3 for Internal Coping Skills (ICS) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A .01 significance level was adopted. The number of subjects, ICS mean scores, and standard deviations for regular education and special education teachers, considered collectively and by demographic variables were summarized (see Table 9).

Question 3 (ICS):

When the teachers were considered collectively, the regular education teachers (N = 84) had a ICS mean score of 2.43, as compared with 2.52 for the special education teachers (N = 116). That is, the special education teachers were found to have a higher ICS mean score than did regular education teachers (see Table 9). The t-test of the two groups' ICS levels yielded a t-value of -2.45 (df = 198; N.S.) (see Table 10).

Question 3.1 (ICS):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that male special education teachers had the highest ICS mean score (2.60), while female regular education teachers

had the lowest mean ICS score (2.39) (see Table 9). The t-test of the male groups' levels of ICS yielded a t-value of -0.54 (df = 31; N.S.), while the t-test of the female groups' levels of ICS yielded a t-value of -3.04 (df = 165; p. = 0.0028) (see Table 10).

Question 3.2 (ICS):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the older special education teachers had the highest ICS mean score (2.61), while the younger regular education teachers had the lowest ICS mean score (2.41) (see Table 9). The t-test resulted in a t-value of -0.71 (df = 103; N.S.) for the younger groups of teahcers and a t-value of -3.39 (df = 93; p. = 0.0010) for the older groups (see Table 10).

Question 3.3 (ICS):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that both the rural regular and special education teachers had the highest ICS mean score (2.53), while regular education teachers from suburban school districts had the lowest ICS mean score (2.36) (see Table 9). The t-test of the ICS levels yielded the following t-values: -0.74 (df = 70; N.S.) for the urban group; 0.03 (df = 51; N.S.) for the rural group; and -2.53 (df = 73; N.S.) for the suburban group of regular and special education teachers (see Table 10).

Question 3.4 (ICS):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N =

92) were considered as one group, while subjects with Master's (N = 97), Educational Specialist (N = 8), or Doctorate degrees (N = 2) constituted a second group. Inspection of the means indicated that the Master's-degree-and-above level special education teachers had the highest mean ICS score (2.58) while Bachelor's-level regular education teachers had the lowest mean ICS score (2.41) among the four pedagogical groups (see Table 9). The t-test yielded a t-value of -0.38 (df = 90; N.S.) for the Bachelor's-degree level teachers and a t-value of -2,46 (df = 105; N.S.) for the Master's-degree-and-above level teachers (see Table 10).

Question 3.5 (ICS):

The subjects' total years of teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the special education teachers with 9.5 to 40 years of career experience had the highest ICS mean score (2.60) while regular education teachers with 1 to 9.5 years of experience had the lowest ICS mean score (2.42) among the four pedagogical groups (see Table 9). The t-test yielded a t-value of -0.51 (df = 98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of -3.59 (df = 98; p. = 0.0005) for the more experienced teachers (9.5 to 40 years) (see Table 10).

Table 9

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by Internal Coping Skills

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	84	2.43	0.27	116	2.52	0.25
Sex						
Male	22	2.55	0.26	11	2.60	0.22
Female	62	2.39	0.26	105	2.51	0.25
Age Level						
Younger	44	2.41	0.27	61	2.44	0.27
Older	40	2.45	0.27	55	2.61	0.19
Type of District						
Urban	20	2.46	0.32	52	2.52	0.26
Rural	21	2.53	0.19	32	2.53	0.24
Suburban	43	2.36	0.27	32	2.52	0.24
Educational Training Level						
Bachelor's	47	2.41	0.27	45	2.43	0.25
Master's and Above	36	2.46	0.26	71	2.58	0.23
Experience Level						
1 - 9.5 years	35	2.42	0.28	65	2.45	0.25
9.5 - 40 years	49	2.43	0.26	51	2.60	0.22

Table 10

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by Internal Coping Skills

Source	df	t Value	p
Total Sample	198	-2.45	N.S.
Sex			
Male	31	-0.54	N.S.
Female	165	-3.04	0.0028
Age Level			
Younger	103	-0.71	N.S.
Older	93	-3.39	0.0010
Type of District			
Urban	70	-0.74	N.S.
Rural	51	0.03	N.S.
Suburban	73	-2.53	N.S.
Educational Training Level			
Bachelor's	90	-0.38	N.S.
Master's and Above	105	-2.46	N.S.
Experience Level			
1 - 9.5 years	98	-0.51	N.S.
9.5 - 40 years	98	-3.59	0.0005

Question 4

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the External Supports scale, and when the two groups were categorized by:

4.1 sex

4.2 age

4.3 type of school district

4.4 educational training level

4.5 years of teaching experience

The test of Question 4 for External Supports (ES) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A .01 significance level was adopted. The number of subjects, ES mean scores, and standard deviations for regular education and special education teachers, considered collectively and by demographic variables were summarized (see Table 11).

Question 4 (ES):

When the teachers were considered collectively, the regular education teachers (N = 84) had an ES mean score of 2.28, as compared with 2.31 for the special education teachers (N = 116). That is, the special education teachers were found to have a higher ES mean score than did regular education teachers (see Table 11). The t-test of the two groups' ES levels yielded a t-value of -0.54 (df = 198; N.S.) (see Table 12).

Question 4.1 (ES):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that male special education teachers had the highest ES mean score (2.35), while male regular education teachers

had the lowest mean ES score (2.28) (see Table 11). The t-test of the male groups' levels of ES yielded a t-value of -0.65 (df = 31; N.S.), while the t-test of the female groups' levels of ES yielded a t-value of -0.36 (df = 165; N.S.) (see Table 12).

Question 4.2 (ES):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the older regular education teachers had the highest ES mean score (2.43), while the younger regular education teachers had the lowest ES mean score (2.15) (see Table 4-A). The t-test resulted in a t-value of -1.21 (df = 103; N.S.) for the younger groups of teachers and a t-value of -0.34 (df = 93; N.S.) for the older groups (see Table 4-B).

Question 4.3 (ES):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that both the urban and rural special education teachers had the highest ES mean score (2.35), while special education teachers from suburban school districts had the lowest ES mean score (2.20) (see Table 11). The t-test of the levels of ES yielded the following t-values: -0.60 (df = 70; N.S.) for the urban group; -0.32 (df = 51; N.S.) for the rural group; and 0.67 (df = 73; N.S.) for the suburban group of regular and special education teachers (see Table 12).

Question 4.4 (ES):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N =

92) were considered as one group, while subjects with Master's (N = 97), Educational Specialist (N = 8), or Doctorate degrees (N = 2) constituted a second group. Inspection of the means indicated that the Master's-degree-and-above level regular education teachers had the highest mean ES score (2.39) while Bachelor's-level regular education teachers had the lowest mean ES score (2.20) (see Table 11). The t-test yielded a t-value of -1.37 (df = 90; N.S.) for the Bachelor's-degree level teachers and a t-value of 0.94 (df = 105; N.S.) for the Master's-degree-and-above level teachers (see Table 12).

Question 4.5 (ES):

The subjects' total teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the special education teachers with 9.5 to 40 years of career experience had the highest ES mean score (2.44) while regular education teachers with 1 to 9.5 years of experience had the lowest ES mean score (2.16) among the four pedagogical groups (see Table 11). The t-test yielded a t-value of -0.72 (df = 98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of -0.99 (df = 98; p. = 0.0005) for the more experienced teachers (9.5 to 40 years) (see Table 12).

Table 11

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by External Supports

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	84	2.28	0.36	116	2.31	0.34
Sex						
Male	22	2.28	0.28	11	2.35	0.32
Female	62	2.29	0.38	105	2.31	0.34
Age Level						
Younger	44	2.15	0.29	61	2.22	0.35
Older	40	2.43	0.36	55	2.41	0.31
Type of District						
Urban	20	2.30	0.40	52	2.35	0.35
Rural	21	2.33	0.30	32	2.35	0.30
Suburban	43	2.26	0.36	32	2.20	0.36
Educational Training Level						
Bachelor's	47	2.20	0.34	45	2.29	0.31
Master's and Above	36	2.39	0.35	71	2.32	0.36
Experience Level						
1 - 9.5 years	35	2.16	0.31	65	2.21	0.32
9.5 - 40 years	49	2.37	0.37	51	2.44	0.33

Table 12

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by External Supports

Source	df	t Value	p
Total Sample	198	-0.54	N.S.
Sex			
Male	31	-0.65	N.S.
Female	165	-0.36	N.S.
Age Level			
Younger	103	-1.21	N.S.
Older	93	0.34	N.S.
Type of District			
Urban	70	-0.60	N.S.
Rural	51	-0.32	N.S.
Suburban	73	0.67	N.S.
Educational Training Level			
Bachelor's	90	-1.37	N.S.
Master's and Above	105	0.94	N.S.
Experience Level			
1 - 9.5 years	98	-0.72	N.S.
9.5 - 40 years	98	-0.99	N.S.

Question 5

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Perception of Stressors scale, and when the two groups were categorized by:

5.1 sex

5.2 age

5.3 type of school district

5.4 educational training level

5.5 years of teaching experience

The test of Question 5 for Perception of Stressors (POS) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A .01 significance level was adopted. The number of subjects, POS mean scores, and standard deviations for regular education and special education teachers, considered collectively and by demographic variables were summarized (see Table 13).

Question 5 (POS):

When the teachers were considered collectively, the regular education teachers (N = 84) had a POS mean score of 1.64, as compared with 1.73 for the special education teachers (N = 116). That is, the special education teachers were found to have a higher POS mean score than did regular education teachers (see Table 13). The t-test of the two groups' levels of POS yielded a t-value of -1.91 (df = 198; N.S.) (see Table 14).

Question 5.1 (POS):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that male special education teachers had the highest POS mean score (1.76), while male regular education teachers

had the lowest mean POS score (1.54) (see Table 13). The t-test of the male groups' levels of POS yielded a t-value of -1.84 (df = 31; N.S.); the t-test of the female groups' levels of POS yielded a t-value of -0.95 (df = 165; N.S.) (see Table 14).

Question 5.2 (POS):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the younger special education teachers had the highest POS mean score (1.79), while the older regular education teachers had the lowest POS mean score (1.57) (see Table 13). The t-test resulted in a t-value of -1.15 (df = 103; N.S.) for the younger groups of teachers and a t-value of -1.80 (df = 93; N.S.) for the older groups (see Table 14).

Question 5.3 (POS):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that the urban special education teachers had the highest POS mean score (1.75), while regular education teachers from rural school districts had the lowest POS mean score (1.61) (see Table 13). The t-test of the levels of POS yielded the following t-values: -1.27 (df = 70; N.S.) for the urban group; -1.50 (df = 51; N.S.) for the rural group; and -0.44 (df = 73; N.S.) for the suburban group of regular and special education teachers (see Table 14).

Question 5.4 (POS):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N =

92) were considered as one group, while subjects with Master's (N = 97), Educational Specialist (N = 8), or Doctorate degrees (N = 2) constituted a second group. Inspection of the means indicated that the Bachelor's-level special education teachers had the highest mean POS score (1.76), while Master's-degree-and-above level regular education teachers had the lowest mean POS score (1.57) (see Table 13). The t-test yielded a t-value of -0.90 (df = 90; N.S.) for the Bachelor's-degree level teachers and a t-value of -2.06 (df = 105; N.S.) for the Master's-degree-and-above level teachers (see Table 14).

Question 5.5 (POS):

The subjects' total teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the special education teachers with 1 to 9.5 years of career experience had the highest POS mean score (1.80), while regular education teachers with 9.5 to 40 years of experience had the lowest POS mean score (1.58) among the four pedagogical groups (see Table 13). The t-test yielded a t-value of -1.03 (df = 98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of -1.01 (df = 98; N.S.) for the more experienced teachers (9.5 to 40 years) (see Table 14).

Table 13

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by Perception of Stressors

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	84	1.64	0.35	116	1.73	0.31
Sex						
Male	22	1.54	0.27	11	1.76	0.43
Female	62	1.68	0.37	105	1.73	0.30
Age Level						
Younger	44	1.71	0.39	61	1.79	0.31
Older	40	1.57	0.29	55	1.68	0.30
Type of District						
Urban	20	1.64	0.27	52	1.75	0.33
Rural	21	1.61	0.38	32	1.74	0.29
Suburban	43	1.66	0.37	32	1.70	0.31
Educational Training Level						
Bachelor's	47	1.70	0.33	45	1.76	0.28
Master's and Above	36	1.57	0.36	71	1.72	0.33
Experience Level						
1 - 9.5 years	35	1.74	0.34	65	1.80	0.30
9.5 - 40 years	49	1.58	0.34	51	1.64	0.31

Table 14

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by Perception of Stressors

Source	df	t Value	p
Total Sample	198	-1.91	N.S.
Sex			
Male	31	-1.84	N.S.
Female	165	-0.95	N.S.
Age Level			
Younger	103	-1.15	N.S.
Older	93	-1.80	N.S.
Type of District			
Urban	70	-1.27	N.S.
Rural	51	-1.50	N.S.
Suburban	73	-0.44	N.S.
Educational Training Level			
Bachelor's	90	-0.90	N.S.
Master's and Above	105	-2.06	N.S.
Experience Level			
1 - 9.5 years	98	-1.03	N.S.
9.5 - 40 years	98	-1.01	N.S.

Question 6

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Psychological Symptoms scale, and when the two groups were categorized by:

6.1 sex

6.2 age

6.3 type of school district

6.4 educational training level

6.5 years of teaching experience

The test of Question 6 for Psychological Symptoms (PSY) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A .01 significance level was adopted. The number of subjects, PSY mean scores, and standard deviations for regular education and special education teachers, considered collectively and by demographic variables, were summarized (see Table 15).

Question 6 (PSY):

When the teachers were considered collectively, the regular education teachers (N = 84) had a PSY mean score of 1.67, as compared with 1.63 for the special education teachers (N = 116). That is, the regular education teachers were found to have a higher PSY mean score than did special education teachers (see Table 15). The t-test of the two groups' levels of PSY yielded a t-value of 0.66 (df = 198; N.S.) (see Table 16).

Question 6.1 (PSY):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that female regular education teachers had the highest PSY mean score (1.74), while male regular education teachers

had the lowest mean PSY score (1.48) (see Table 15). The t-test of the male groups' levels of PSY yielded a t-value of -0.38 (df = 31; N.S.), the t-test of the female groups' level of PSY yielded a t-value of 1.39 (df = 165; N.S.) (see Table 16).

Question 6.2 (PSY):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the younger regular education teachers had the highest PSY mean score (1.78), while the older special education teachers had the lowest PSY mean score (1.52) (see Table 15). The t-test resulted in a t-value of 0.61 (df = 103; N.S.) for the younger groups of teachers and a t-value of 0.34 (df = 93; N.S.) for the older groups (see Table 16).

Question 6.3 (PSY):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that the urban regular education teachers had the highest PSY mean score (1.74), while regular education teachers from rural school districts had the lowest PSY mean score (1.59) (see Table 15). The t-test of the levels of PSY yielded the following t-values: 1.16 (df = 70; N.S.) for the urban group; -0.73 (df = 51; N.S.) for the rural group; and 0.62 (df = 73; N.S.) for the suburban group of regular and special education teachers (see Table 16).

Question 6.4 (PSY):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N =

92) were considered as one group, while subjects with Master's (N = 97), Educational Specialist (N = 8), or Doctorate degrees (N = 2) constituted a second group. Inspection of the means indicated that the Bachelor's-level regular education teachers had the highest mean PSY score (1.75) while Master's-degree-and-above level regular education teachers had the lowest mean PSY score (1.56) (see Table 15). The t-test yielded a t-value of 0.28 (df = 90; N.S.) for the Bachelor's-degree level teachers and a t-value of -0.17 (df = 105; N.S.) for the Master's-degree-and-above level teachers (see Table 16).

Question 6.5 (PSY):

The subjects' total teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the regular education teachers with 1 to 9.5 years of career experience had the highest PSY mean score (1.76), while special education teachers with 9.5 to 40 years of experience had the lowest PSY mean score (1.52) among the four pedagogical groups (see Table 15). The t-test yielded a t-value of 0.50 (df = 98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of 1.05 (df = 98; N.S.) for the more experienced teachers (9.5 to 40 years) (see Table 16).

Table 15

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by Psychological Symptoms

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	84	1.67	0.48	116	1.64	0.38
Sex						
Male	22	1.48	0.33	11	1.52	0.32
Female	62	1.74	0.51	105	1.64	0.38
Age Level						
Younger	44	1.78	0.51	61	1.73	0.39
Older	40	1.55	0.41	55	1.52	0.33
Type of District						
Urban	20	1.74	0.50	52	1.62	0.35
Rural	21	1.59	0.39	32	1.67	0.43
Suburban	43	1.68	0.51	32	1.62	0.38
Educational Training Level						
Bachelor's	47	1.75	0.48	45	1.73	0.39
Master's and Above	36	1.56	0.45	71	1.57	0.36
Experience Level						
1 - 9.5 years	35	1.76	0.45	65	1.72	0.41
9.5 - 40 years	49	1.61	0.49	51	1.52	0.31

Table 16

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by Psychological Symptoms

Source	df	t Value	p
Total Sample	198	0.66	N.S.
Sex			
Male	31	-0.38	N.S.
Female	165	1.39	N.S.
Age Level			
Younger	103	0.61	N.S.
Older	93	0.34	N.S.
Type of District			
Urban	70	1.16	N.S.
Rural	51	-0.73	N.S.
Suburban	73	0.62	N.S.
Educational Training Level			
Bachelor's	90	0.28	N.S.
Master's and Above	105	-0.17	N.S.
Experience Level			
1 - 9.5 years	98	0.50	N.S.
9.5 - 40 years	98	1.05	N.S.

Question 7

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Physiological Symptoms scale, and when the two groups were categorized by:

7.1 sex

7.2 age

7.3 type of school district

7.4 educational training level

7.5 years of teaching experience

The test of Question 7 for Physiological Symptoms (PHY) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A .01 significance level was adopted. The number of subjects, PHY mean scores, and standard deviations for regular education and special education teachers, considered collectively and by demographic variables, were summarized (see Table 17).

Question 7 (PHY):

When the teachers were considered collectively, the regular education teachers (N = 84) had a PHY mean score of 0.92, as compared with 0.91 for the special education teachers (N = 116). That is, the regular education teachers were found to have a higher PHY mean score than did special education teachers (see Table 17). The t-test of the two groups' levels of PHY yielded a t-value of 0.03 (df = 198; N.S.) (see Table 18).

Question 7.1 (PHY):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that female regular education teachers had the highest PHY mean score (0.97), while male special education teachers

had the lowest mean PHY score (0.73) (see Table 17). The t-test of the male groups' levels of PHY yielded a t-value of 0.25 (df = 31; N.S.), the t-test of the female groups' levels of PHY yielded a t-value of 0.60 (df = 155; N.S.) (see Table 18).

Question 7.2 (PHY):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the younger special education teachers had the highest PHY mean score (1.03), while the older special education teachers had the lowest PHY mean score (0.36) (see Table 17). The t-test resulted in a t-value of -0.96 (df = 103; N.S.) for the younger groups of teachers and a t-value of 0.34 (df = 93; N.S.) for the older groups (see Table 18).

Question 7.3 (PHY):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that the urban regular education teachers had the highest PHY mean score (1.00), while regular education teachers from rural school districts had the lowest PHY mean score (0.81) (see Table 17). The t-test of the levels of PHY yielded the following t-values: 0.57 (df = 70; N.S.) for the urban group; -1.03 (df = 51; N.S.) for the rural group; and 0.79 (df = 73; N.S.) for the suburban group of regular and special education teachers (see Table 18).

Question 7.4 (PHY):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N =

92) were considered as one group, while subjects with Master's (N = 97), Educational Specialist (N = 8), or Doctorate degrees (N = 2) constituted a second group. Inspection of the means indicated that the Bachelor's-level special education teachers had the highest mean PHY score (1.01) while Master's-degree-and-above level teachers in both regular and special education had the lowest mean PHY score (0.85) (see Table 17). The t-test yielded a t-value of -0.51 (df = 90; N.S.) for the Bachelor's-degree level teachers and a t-value of -0.10 (df = 105; N.S.) for the Master's-degree-and-above level teachers (see Table 18).

Question 7.5 (PHY):

The subjects' total teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the special education teachers with 1 to 9.5 years of career experience had the highest PHY mean score (1.04), while special education teachers with 9.5 to 40 years of experience had the lowest PHY mean score (0.76) among the four pedagogical groups (see Table 17). The t-test yielded a t-value of -1.51 (df = 98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of 2.06 (df = 98; N.S.) for the more experienced teachers (9.5 to 40 years) (see Table 18).

Table 17

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by Physiological Symptoms

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	84	0.92	0.39	116	0.91	0.39
Sex						
Male	22	0.76	0.32	11	0.73	0.47
Female	62	0.97	0.40	105	0.93	0.38
Age Level						
Younger	44	0.95	0.44	61	1.03	0.38
Older	40	0.87	0.33	55	0.78	0.36
Type of District						
Urban	20	1.00	0.45	52	0.94	0.42
Rural	21	0.81	0.35	32	0.93	0.44
Suburban	43	0.93	0.38	32	0.87	0.28
Educational Training Level						
Bachelor's	47	0.97	0.39	45	1.01	0.38
Master's and Above	36	0.85	0.38	71	0.85	0.38
Experience Level						
1 - 9.5 years	35	0.92	0.38	65	1.04	0.38
9.5 - 40 years	49	0.92	0.40	51	0.76	0.35

Table 18

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by Physiological Symptoms

Source	df	t Value	p
Total Sample	198	0.03	N.S.
Sex			
Male	31	0.24	N.S.
Female	165	0.60	N.S.
Age Level			
Younger	103	-0.96	N.S.
Older	93	1.22	N.S.
Type of District			
Urban	70	0.57	N.S.
Rural	51	-1.03	N.S.
Suburban	73	0.79	N.S.
Educational Training Level			
Bachelor's	90	-0.51	N.S.
Master's and Above	105	-0.10	N.S.
Experience Level			
1 - 9.5 years	98	-1.51	N.S.
9.5 - 40 years	98	2.06	N.S.

Question 8

Were there statistically significant differences between the scores of regular education teachers and special education teachers collectively on the Reactions to Stress scale, and when the two groups were categorized by:

8.1 sex

8.2 age

8.3 type of school district

8.4 educational training level

8.5 years of teaching experience

The test of Question 8 for Reactions to Stress (RS) was obtained by utilizing a two-tailed t-test for a difference between two independent means. A .01 significance level was adopted. The number of subjects, RS mean scores, and standard deviations for regular education and special education teachers, considered collectively and by demographic variables, were summarized (see Table 19).

Question 8 (RS):

When the teachers were considered collectively, the regular education teachers (N=84) had a RS mean score of 1.95, as compared with 2.01 for the special education teachers (N=116). That is, the special education teachers were found to have a higher RS mean score than did regular education teachers (see Table 19). The t-test of the two groups' RS levels yielded a t-value of -1.53 (df=198; N.S.) (see Table 20).

Question 8.1 (RS):

The two groups of teachers were sorted according to sex. Inspection of the means revealed that male special education teachers had the highest RS mean score (2.14), while female regular education teachers

had the lowest mean RS score (1.94) (see Table 19). The t-test of the male groups' RS levels yielded a t-value of -1.75 (df=31; N.S.); the t-test of the female groups; levels of RS yielded a t-value of -1.26 (df=165; N.S.) (see Table 20).

Question 8.2 (RS):

The ages of the sample population ranged from 23 to 68 with a mean of 38.9. Therefore, the age variable was divided into two groups--younger and older. Inspection of the means indicated that the older special education teachers had the highest RS mean score (2.07), while the younger regular education teachers had the lowest RS mean score (1.90) (see Table 19). The t-test resulted in a t-value of -1.18 (df=103; N.S.) for the younger groups of teachers and a t-value of -1.36 (df=93; N.S.) for the older groups of teachers (see Table 20).

Question 8.3 (RS):

The teachers were sorted according to self-reported type of school district--urban, rural, or suburban. Inspection of the means indicated that the rural regular education teachers had the highest RS mean score (2.06), while regular education teachers from urban school districts had the lowest RS mean score (1.88) (see Table 19). The t-test of the levels of RS yielded the following t-values: -2.33 (df=70; N.S.) for the urban group; 0.57 (df=51; N.S.) for the rural group; and 0.31 (df=73; N.S.) for the suburban group of regular and special education teachers (see Table 20).

Question 8.4 (RS):

In terms of educational training level, teachers who reported a Bachelor's degree as their highest level of educational training (N=92) were considered as one group, while subjects with Master's (N=92),

Educational Specialist (N=8), or Doctorate degrees (N=2) consittuted a second group. Inspection of the means indicated that the Master's-degree-and-above level special education teachers had the highest mean PHY score (2.05), while Bachelor's-level regular education teachers had the lowest mean RS score (1.93) among the four pedagogical groups (see Table 19). The t-test yielded a t-value of -0.37 (df=90; N.S.) for the Bachelor's-degree level teachers and a t-value of -1.19 (df=105; N.S.) for the Master's-degree-and-above level teachers (see Table 20).

Question 8.5 (RS):

The subjects' total years of teaching experience ranged from one to 40 years. In order to get the same number of teachers in each group, 9.5 years--the median number of years of experience--was used as the basis for categorization. Inspection of the means indicated that the special education teachers with 9.5 to 40 years of career experience had the highest RS mean score (2.10), while special education teachers with 1 to 9.5 years of experience had the lowest RS mean score (1.93) among the four pedagogical groups (see Table 19). The t-test yielded a t-value of 0.52 (df=98; N.S.) for the less experienced group (1 to 9.5 years) and a t-value of -3.02 (df=98; N.S.) for the more experienced teachers (9.5 to 40 yrs.) (see Table 20).

Table 19

Number of Subjects, Means, and Standard Deviations for Regular Education Teachers and Special Education Teachers by Reactions to Stress

Category or Level	Regular Education Teacher N	M	SD	Special Education Teacher N	M	SD
Total Sample	85	1.95	0.26	116	2.01	0.25
Sex						
Male	22	1.98	0.24	11	2.14	0.27
Female	62	1.94	0.28	105	1.99	0.25
Age Level						
Younger	44	1.90	0.25	61	1.95	0.25
Older	40	2.00	0.27	55	2.07	0.24
Type of District						
Urban	20	1.88	0.31	52	2.05	0.27
Rural	21	2.06	0.20	32	2.03	0.22
Suburban	43	1.93	0.26	32	1.91	0.24
Educational Training Level						
Bachelor's	47	1.93	0.26	45	1.94	0.22
Master's and Above	36	1.98	0.27	71	2.05	0.26
Experience Level						
1 - 9.5 years	35	1.96	0.26	65	1.93	0.23
9.5 - 40 years	49	1.94	0.27	51	2.10	0.25

Table 20

t-Test Summary Table of Regular Education Teachers and Special Education Teachers by Reactions to Stress

Source	df	t Value	p
Total Sample	198	-1.53	N.S.
Sex			
Male	31	-1.75	N.S.
Female	165	-1.26	N.S.
Age Level			
Younger	103	-1.18	N.S.
Older	93	-1.36	N.S.
Type of District			
Urban	70	-2.33	N.S.
Rural	51	0.57	N.S.
Suburban	73	0.31	N.S.
Educational Training Level			
Bachelor's	90	-0.37	N.S.
Master's and Above	105	-1.19	N.S.
Experience Level			
1 - 9.5 years	98	0.52	N.S.
9.5 - 40 years	98	-3.02	0.0032

Question 9

Were there statistically significant differences between the mean absence rate of special education teachers and that of regular education teachers on the basis of self-reported data?

The test of Question 9 was obtained by utilizing a two-tailed t-test. The .01 level of significance was used as the level of confidence. When the teachers were considered collectively, the regular education teachers (N=84) had a mean absence rate of 4.05 days compared with 4.38 days for the special education teachers (N=116). The t-test of the two groups' absenteeism levels yielded a t-value of -0.55 (df=197; N.S.).

Question 10

Were there statistically significant differences between the stress-related behaviors (as measured by the questions listed below) of regular education teachers and special education teachers?

10.1 Do you call in sick occasionally due to stress?

10.2 Do you plan to teach until retirement?

10.3 Do you plan to stay in the field of education?

10.4 Would you encourage your son or daughter to begin a career in education?

10.5 Knowing what you know now, if you had a second chance, would you re-enter the teaching field?

10.6 According to the following definition, do you consider yourself burned out?

"Emotional exhaustion resulting from the stress of interpersonal contact" (including low morale, high absenteeism, and loss of positive feelings, sympathy, and respect for students). (Maslach, 1978, p. 56)

The chi-square x^2 test was employed to statistically evaluate this research question on each of the six stress-related behaviors. Based on the p-values of each chi-square test, no statistically significant differences at the .01 level were discovered between the stress-related behaviors of regular education teachers and special education teachers on any of the six questions.

The responses and percentages of both groups of educators for each of the six questions were summarized in frequency tables. Responses other than "yes" and "no" were not included in the comparisons, except on question 10.6, "Do you consider yourself burned out?" "Getting there" responses to this question were grouped with the "yes" responses. Because of this arrangement, N varies across the six items.

Question 10.1:

When asked, "Do you call in sick occasionally due to stress?", 25 percent (N=21) of the regular education teachers and 36 percent (N=42) of the special education teachers said "yes," while 75 percent (N=63) of the regular education teachers and 64 percent (N=74) of the special education teachers responded "no."

Inspection of the percentages derived from teacher responses indicated that the special educators reported to call in sick occasionally due to stress more frequently than did the regular educators (see Table 21). The Yates corrected chi-square p-value of 0.1261 was not statistically significant at the .01 level.

Question 10.2:

When asked, "Do you plan to teach until retirement?", 46 percent (N=34) of the regular education teachers and 39 percent (N=37) of the special education teachers responded "yes," while 54 percent (N=40) of

the regular education teachers and 61 percent (N=58) of the special education teachers responded "no."

Inspection of the percentages derived from teacher responses indicated that the regular educators reported that they planned to teach until retirement more frequently than did the special educators (see Table 22). The Yates corrected chi-square p-value of 0.4488 was not statistically significant at the .01 level.

Question 10.3:

When asked, "Do you plan to stay in the field of education?", 76 percent (N=35) of the regular education teachers and 65 percent (N=45) of the special educaton teachers responded "yes," while 24 percent (N=11) of the regular education teachers and 35 percent (N=24) of the special education teachers responded "no."

Inspection of the percentages derived from the responses of the group of teachers (N=129) who were not planning to teach until retirement indicated that more regular educators reported that they planned to stay in the field of education than did special educators (see Table 23). The Yates corrected chi-square p-value of 0.3010 was not statistically significant at the .01 level.

Question 10.4:

When asked, "Would you encourage your son or daughter to begin a career in education?", 42 percent (N=34) of the regular education teachers and 31 percent (N=33) of the special education teachers responded "yes," while 58 percent (N=47) of the regular education teachers and 69 percent (N=75) of the special education teachers responded "no."

Inspection of the percentages derived from teacher responses indicated that more special educators indicated that they would not encourage

their offspring to begin a career in education than did regular educators (see Table 24). The Yates corrected chi-square p-value of 0.1414 was not statistically significiant at the .01 level.

Question 10.5:

When asked, "Knowing what you know now, if you had a second chance, would you re-enter the teaching field?", 64 percent (N=54) of the regular education teachers and 57 percent (N=64) of the special education teachers said "yes," while 36 percent (N=29) of the regular education teachers and 43 percent (N=48) of the special education teachers responded "no."

Inspection of the percentages derived from teacher responses indicated that more special educators reported that they would not re-enter the teaching field than did regular educators (see Table 25). The Yates corrected chi-square p-value of 0.4016 was not statistically significant at the .01 level.

Question 10.6:

When asked, "Do you consider yourself burned out?", 26 percent (N=22) of the regular education teachers and 34 percent (N=40) of the special education teachers responded "yes," while 74 percent (N=62) of the regular education teachers and 63 percent (N=76) of the special education teachers responded "no."

Inspection of the percentages derived from teacher responses indicated that more special educators reported to be burned out than regular educators (see Table 26). The Yates corrected chi-square p-value of 0.2728 was not statistically significant at the .01 level.

Table 21

Frequency Table for Regular and Special Education Teachers' Responses to Question 10.1: "Do you call in sick occasionally due to stress?"

	YES	NO	TOTAL	PERCENT OF TOTAL SAMPLE
REGULAR EDUCATION TEACHERS	21 25%	63 75%	84	100%
SPECIAL EDUCATION TEACHERS	42 36%	74 64%	116	100%
TOTAL	63 31.5%	137 68.5%	200	100%

Yates corrected chi-square p-value 0.1261, N.S.

Table 22

Frequency Table for Regular and Special Education Teachers' Responses to Question 10.2: "Do you plan to teach until retirement?"

	YES	NO	TOTAL	PERCENT OF TOTAL SAMPLE
REGULAR EDUCATION TEACHERS	34 46%	40 54%	74	88%
SPECIAL EDUCATION TEACHERS	37 39%	58 61%	95	95%
TOTAL	71 42%	98 58%	169	84.5%

Yates corrected chi-square p-value 0.4488, N.S.

Table 23

Frequency Table for Regular and Special Education Teachers' Responses to Question 10.3: "Do you plan to stay in the field of education?"*

	YES	NO	TOTAL	PERCENT OF TOTAL SAMPLE
REGULAR EDUCATION TEACHERS	35 76%	11 24%	46	92%
SPECIAL EDUCATION TEACHERS	45 65%	24 35%	69	87%
TOTAL	80 70%	35 30%	115	89%

Yates corrected chi-square p-value 0.3010, N.S.

* This question was directed to the 129 (Reg. N=50, Sp. N=79) teachers who had answered either "no" or "don't know" to Question 10.2.

Table 24

Frequency Table for Regular and Special Education Teachers' Responses to Question 10.4: "Would you encourage your son or daughter to begin a career in education?"

	YES	NO	TOTAL	PERCENT OF TOTAL SAMPLE
REGULAR EDUCATION TEACHERS	34 42%	47 58%	81	96%
SPECIAL EDUCATION TEACHERS	33 31%	75 69%	108	93%
TOTAL	67 35%	122 65%	189	94.5%

Yates corrected chi-square p-value 0.1414, N.S.

Table 25

Frequency Table for Regular and Special Education Teachers' Responses to Question 10.5: "Knowing what you know now, if you had a second chance, would you re-enter the teaching field?"

	YES	NO	TOTAL	PERCENT OF TOTAL SAMPLE
REGULAR EDUCATION TEACHERS	52 64%	29 36%	81	96%
SPECIAL EDUCATION TEACHERS	64 57%	48 43%	112	96.5
TOTAL	116 60%	77 40%	193	96.5

Yates corrected chi-square p-value 0.4016, N.S.

Table 26

Frequency Table for Regular and Special Education Teachers' Responses to Question 10.6: "Do you consider yourself burned out?"

	YES/ "GETTING THERE"	NO	TOTAL	PERCENT OF TOTAL SAMPLE
REGULAR EDUCATION TEACHERS	22 26%	62 74%	84	100%
SPECIAL EDUCATION TEACHERS	40 34%	76 63%	116	100%
TOTAL	62 31%	138 69%	200	100%

Yates corrected chi-square p-value 0.2728, N.S.

Question 11

What were the most frequently reported work-related stressors for the sample of teachers considered collectively and by teaching area--regular education or special education?

To answer this question, both the investigator and the research assistant independently grouped all teacher responses into 21 categories of stressors.

The stressors, ranked according to those first named as the factor/condition within the work environment causing the most distress, are presented in Table 27. Because respondents were asked to name the top two stressors within their work environment, the number and percentage of teachers who named each stressor as a second choice are also detailed along the right margin of Table 27.

Corresponding tables were prepared for the regular education teachers (Table 28) and for the special education teachers (Table 29) who responded to this question.

Inspection of tables 27, 28, and 29 revealed the following similarities:

1. "Lack of support from administrators" was the most frequent first response for all three groups (regular teachers, special education teachers, and total group) and the most frequent second response for both the total group of respondents and for the special education teachers. One regular education teacher responded, "My principal never supports me. He doesn't even care if I'm breathing, just as long as I show up for work."

2. "Working with other teachers" was the next most frequently reported stressor for both the total group and the special education group; it was also the most frequent second response for the regular educators.
3. A third response, "Discipline; behavior problems" was ranked near the top for all three groups both as a first and as a second stressor.

The following differences were noted:

1. While "Paperwork; IEP's" was ranked fourth by the total sample of teachers, and third by the special education teachers, it was not named as a first stressor by the regular education teachers.
2. "Low teaching salary; poor relationship with the Board of Education" was ranked near the top (fifth) by the regular educators, close to the median by the total group (13th), and near the end (17th) by the special education teachers.
3. As might be expected, "Dealing with different school staffs and agencies" was not a high-priority stressor for the regular educators (ranked last), nor for the total sample (ranked 18th); however, it was ranked 13th for the group of special education teachers.

Table 27

Most Frequently Reported Work-Related Stressors for the Total Group

Reported as Most Stressful			Stressor	Reported as 2nd Most Stressful	
Rank	N	Percentage		N	Percentage
1	38	19.6%	Lack of support from administrators	26	14.2%
2	22	11.3%	Working with other teachers	20	10.9%
3	21	10.8%	Discipline; behavior problems	20	10.9%
4	15	7.7%	Paperwork; IEP's	11	6.0%
5	14	7.2%	Lack of time to accomplish everything	13	7.1%
6	9	4.6%	Number of assigned students	17	9.3%
7	9	4.6%	Parent expectations	14	7.7%
8	9	4.6%	Uncertainty; involuntary changes; accountability	3	1.6%
9	8	4.1%	Students' poor attitude; students' different value system; student absenteeism	6	3.3%
10	7	3.6%	Poor economic conditions; lack of teacher aides; failure to hire substitute teachers	10	5.5%
11	7	3.6%	Classroom environment problems (space, lighting, etc.)	8	4.4%
12	7	3.6%	Feeling inadequate at giving or obtaining needed services for students; lack of support help	5	2.7%
13	6	3.1%	Low teaching salary; poor relationship w/Board of Education	5	2.7%
14	5	2.6%	Too many extracurricular responsibilities	3	1.6%
15	4	2.1%	Low functioning level of students; misdiagnosis of students	6	3.3%
16	4	2.1%	Organizational factors--staffings, unnecessary meetings, extra work outside of teaching with no extra pay	3	1.6%
17	3	1.5%	Poor image of teachers; lack of public support; social pressures	3	1.6%

Table 27

(Continued)

Reported as Most Stressful			Stressor	Reported as 2nd Most Stressful	
Rank	N	Percentage		N	Percentage
18	3	1.5%	Dealing w/different school staffs and agencies	3	1.6%
19	2	1.0%	Too much pressure on students	1	0.5%
20	1	0.5%	Feeling unappreciated by administrators, parents, and students	1	0.5%
21	0	-	Loss of enthusiasm; tired feeling locked in	4	2.2%
	194			183	

Table 28

Most Frequently Reported Work-Related

Stressors for Regular Education Teachers

Reported as Most Stressful			Stressor	Reported as 2nd Most Stressful	
Rank	N	Percentage		N	Percentage
1	20	24.4%	Lack of support from administrators	8	10.5%
2	10	12.2%	Discipline; behavior problems	8	10.5%
3	8	9.4%	Lack of time to accomplish everything	4	5.3%
4	5	6.1%	Working with other teachers	9	11.8%
5	5	6.1%	Low teaching salary; poor relationship with the Board of Education	4	5.3%
6	5	6.1%	Too many extracurricular activities	3	3.9%
7	5	6.1%	Uncertainty; involuntary transfers; accountability	2	2.6%
8	5	6.1%	Students' poor attitude; students' different value system; student absenteeism	3	3.9%

Table 23
(Continued)

Reported as Most Stressful			Stressor	Reported as 2nd Most Stressful	
Rank	N	Percentage		N	Percentage
9	3	3.7%	Number of assigned students	4	5.3%
10	3	3.7%	Poor economic conditions; lack of resources; lack of teacher aides; failure to hire substitute teachers	4	5.3%
11	2	2.4%	Parent expectations	7	9.2%
12	2	2.4%	Feeling inadequate at giving or obtaining services for students; lack of support help	5	6.6%
13	2	2.4%	Classroom environment problems (space, lighting, etc.)	4	5.3%
14	2	2.4%	Poor image of teachers; lack of public support; social pressures	2	1.3%
15	2	2.4%	Too much pressure on students	1	1.3%
16	2	2.4%	Organizational factors--staffings, unnecessary meetings, extra work outside of teaching with no extra pay	1	1.3%
17	1	1.2%	Feeling unappreciated by administrators, parents, and students	-	-
18	-	-	Low functioning level of students; misdiagnosis of students	2	2.6%
19	-	-	Loss of enthusiasm; tired; feeling locked in	2	2.6%
20	-	-	Paperwork; IEP's	2	2.6%
21	-	-	Dealing with different school staffs and agencies	1	1.3%
	82			76	

Table 29

Most Frequently Reported Work-Related Stressors for Special Education Teachers

Reported as Most Stressful			Stressor	Reported as 2nd Most Stressful	
Rank	N	Percentage		N	Percentage
1	18	16.1%	Lack of support from administrators	18	16.8%
2	17	15.2%	Working with other teachers	12	11.2%
3	15	13.4%	Paperwork; IEP's	9	8.4%
4	11	9.8%	Discipline; behavior problems	12	11.2%
5	7	6.3%	Parent expectations	7	6.5%
6	6	5.4%	Lack of time to accomplish everything	9	8.4%
7	6	5.4%	Number of assigned students	13	12.1%
8	5	4.5%	Classroom environment problems (space, lighting, etc.)	4	3.7%
9	5	4.5%	Feeling inadequate at giving or obtaining needed services for students; lack of support help	-	-
10	4	3.6%	Poor economic conditions; lack of resources; lack of teacher aides; failure to hire substitute teachers	6	5.6%
11	4	3.6%	Uncertainty; involuntary transfers; accountability	1	.9%
12	4	3.6%	Low functioning level of students; diagnosis of students	4	3.7%
13	3	2.7%	Dealing with different school staffs and agencies	2	1.9%
14	3	2.7%	Students' poor attitude; students' different value system; student absenteeism	2	1.9%
15	2	1.8%	Organizational factors--staffings, unnecessary meetings, extra work outside of teaching with no extra pay	2	1.9%
16	1	.9%	Poor image of teachers; lack of public support; social pressures	2	1.9%
17	1	.9%	Low teaching salary; poor relationship with the Board of Education	1	.9%

Table 29
(Continued)

Reported as Most Stressful			Stressor	Reported as 2nd Most Stressful	
Rank	N	Percentage		N	Percentage
18	-	-	Loss of enthusiasm; tired; feeling locked in	2	1.9%
19	-	-	Feeling unappreciated by administrators, parents and students	1	.9%
	112			107	

Question 12

Was there a difference between the professional, work-related stressors perceived as most stressful by regular and by special education teachers on the Perception of Stressors scale?

On this instrument, respondents were asked to rate each of 16 work-related stressors as "slightly stressful," "moderately stressful," or "extremely stressful." To test Question 12, the mean scores for each of the 16 stressors were computed for both the regular education teachers and the special education teachers. Thereafter, the stressors for each group were ranked according to mean scores (see Table 30).

A comparison of the rank orders by groups of respondents showed that the groups generally agreed on all stressors. Four of the five top ranked stressors were the same for both regular and special educators. That is, time pressures, administrative duties, discipline and classroom management, and teaching salary were perceived by both groups as the most stressful. While "special education legal compliance; IEP's" was ranked third by the special educators, as might be expected, it was ranked much lower (14th) by the regular educators. Again, both groups agreed on four of their five lowest ranked stressors. Thus, professional growth activities, parent-teacher relationships, availability of materials, and threats of personal injury were perceived by both groups as being the least stressful. Based on the above analysis, the conclusion was drawn that there was not a great deal of difference between the professional, work-related stressors perceived as most stressful by regular education teachers and special education teachers as measured by the Perception of Stressors scale.

Table 30

Perception of Stressors by

Regular Education and Special Education Teachers

Ranked by Respondent Group Means

Regular Education Teachers		Special Education Teachers	
M	Stressor	M	Stressor
2.12	Time pressures	2.42	Administrative duties
2.06	Administrative duties	2.33	Time pressures
1.92	Discipline and classroom management	2.22	Special education legal compliance, IEP's
1.88	Teaching salary	1.87	Teaching salary
1.75	Conflicting demands from administrators, parents	1.85	Discipline and classroom management
1.75	Crowded classrooms/high pupil-teacher ratio	1.82	Job dissatisfaction
1.72	Lack of support and guidance from supervisor	1.76	Lack of support and guidance from supervisor
1.63	Job dissatisfaction	1.74	Conflicting demands from administrators, parents
1.55	Maintaining working relationship w/supervisor, principal, and others	1.63	Mainstreaming
1.54	Other classroom conditions (space, heating, air-conditioning, etc.)	1.61	Crowded classrooms/high pupil-teacher ratio
1.53	Mainstreaming	1.52	Other classroom conditions (space, heating, air-conditioning, etc.)
1.49	Professional growth activities	1.48	Maintaining working relationship w/supervisor, principal, and others
1.44	Parent-teacher relationships	1.47	Availability of materials (books, supplies, etc.)
1.43	Special education legal compliance, IEP's	1.43	Parent-teacher relationships
1.41	Availability of materials (books, supplies, etc.)	1.43	Professional growth activities
1.07	Threats of personal injury	1.15	Threats of personal injury

Question 13

Did teachers who reported to "call in sick occasionally due to stress" experience a higher (statistically significant) level of psychological and physiological symptoms of stress than teachers who did not?

The test of Question 10 was conducted by utilizing a t-test. Table 31 summarizes the number of subjects, Psychological Symptoms and Physiological Symptoms mean scores, and standard deviations for teachers responding "yes" (Yes group) and teachers answering "no," (No group) to the question, "Do you call in sick occasionally due to stress?" The t-test of the two groups' levels of Psychological Symptoms yielded a t-value of 2.80 (df=198; p=.0056). On Physiological Symptoms the t-test of the two groups' mean scores yielded a t-value of 3.20 (df=198; p=.0016). Therefore, teachers who reported to experience a high level of Psychological Symptoms of stress and/or Physiological Symptoms of stress were found to be much more likely to call in sick due to stress than teachers who did not.

Question 14

Did the group of teachers who reported to be burned out or "getting there," according to the Maslach (1978) definition of burnout, differ statistically from those who reported not to be burned out? Did they differ on the following variables:

14.1 age

14.2 total teaching experience

14.3 Stress Prone Personality Inventory

14.4 Life Experience Stress Level scale

14.5 Internal Coping Skills scale

14.6 External Supports scale

Table 31

Number of Subjects, Means, and Standard Deviations for Teachers Who Did and Teachers Who Did Not "Call in Sick due to Stress"

Scale	Yes - "Call in Sick Occasionally due to Stress"			No - "Do Not Call in Sick Occasionally due to Stress		
	N	M	SD	N	M	SD
Psychological Symptoms of Stress	63	1.77	0.41	137	1.59	0.42
Physiological Symptoms of Stress	63	1.04	0.35	137	0.86	0.40

14.7 Perception of Stressors scale

14.8 Psychological Symptoms scale

14.9 Physiological Symptoms scale

14.10 Reactions to Stress scale

In order to test Question 14, the sample of 200 midwestern teachers were sorted into two groups--the YES group, those who reported to be burned out or "getting there," and the NO group, those who said they were not burned out.

Hotelling's T^2 (Winer, 1971) is an appropriate test statistic for comparing group responses on multiple variables. In a comparison between those teachers who reported to be burned out (YES group) and those who did not (NO group), the Hotelling T^2 value (64.4245) was statistically significant at the .01 level (df=186; p=0.0000).

The two groups of teachers were considered singly according to the 10 variables outlined in Question 14 above. Considered singly the covariance among the variables was disregarded.

Question 14.1 (age):

The two groups of teachers were sorted according to age. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the average age of the NO group (38.5) was higher than that of the YES group (35.9). The t-test of the difference between the two groups' ages yielded a t-value of 0.11 (df=194; N.S.) (see Table 33).

Question 14.2 (total teaching experience):

The two groups of teachers were sorted according to total years of teaching experience. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32. Inspection of the

means revealed that the mean years of experience for the NO group (12.5) was higher than that of the YES group (10.2). The t-test of the difference between the two groups' average years of teaching experience yielded a t-value of 1.81 (df=198; N.S.) (see Table 33).

Question 14.3 (SPPI):

The two groups of subjects were sorted according to their total scores on the Stress Prone Personality Inventory (SPPI). The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the NO group had a higher mean score (3.17) on the SPPI than did the YES group (2.91). The t-test of the difference between two groups' average scores on the SPPI yielded a t-value of 4.12 (df=198; p=0.0001) (see Table 33).

Question 14.4 (LESL):

The two groups of teachers were sorted according to their total scores on the Life Experience Stress Level (LESL) scale. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the NO group had a higher mean score (13.4) on the LESL scale than did the YES group (9.98). The t-test of the difference between the two groups' average scores on the LESL yielded a t-vaue of 1.40 (df=198; N.S.) (see Table 33).

Question 14.5 (ICS):

The two groups of teachers were sorted according to their total scores on the Internal Coping Skills (ICS) scale. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the NO group had a higher mean score (2.52) on the IC scale than did the YES group (2.40). The t-test of the difference between the two groups' average scores on the ICS yielded a t-value of 1.40 (df=198; p=.0019) (see Table 33).

Question 14.6 (ES):

The two groups of teachers were sorted according to their total scores on the External Supports (ES) scale. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the NO group had a higher mean score (2.37) on the ES scale than did the YES group (2.15). The t-test of the difference between the two groups' average ES scores yielded a t-value of 4.42 (df=198; p=0.0000) (see Table 33).

Question 14.7 (POS):

The two groups of teachers were sorted according to their total scores on the Perception of Stressors (POS) scale. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the YES group had a higher mean score (1.88) on the POS scale than did the NO group (1.61). The t-test of the difference between the two groups' average scores on the POS yielded a t-value of -5.78 (df=198; p=0.0000) (see Table 33).

Question 14.8 (PSY):

The two groups of teachers were sorted according to their total scores on the Psychological Symptoms (PSY) scale. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the YES group had a higher mean score (1.88) on the PSY scale than did the NO group (1.54). The t-test of the difference between the two groups' average scores on the PSY yielded a t-value of -5.55 (df=198; p<.0000 (see Table 33).

Question 14.9 (PHY):

The two groups of teachers were sorted according to their total scores on the Physiological Symptoms (PHY) scale. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the YES group had a higher mean score (1.10) on the PHY scale than did the NO group (0.83). The t-test of the difference between the two groups' average PHY scores yielded a t-value of -4.76 (df=198; p=0.0000) (see Table 32).

Question 14.10 (RS):

The two groups of teachers were sorted according to their total scores on the Reactions to Stress (RS) scale. The number of teachers, the means, and the standard deviations for each group are summarized in Table 32.

Inspection of the means revealed that the NO group had a higher mean score (2.02) on the RS scale than did the YES group (1.90). The t-test of the difference between the two groups' average scores on the RS scale yielded a t-value of 2.86 (df=198; p=0.0047) (see Table 33).

Table 32

Means and Standard Deviations for Teachers Who Reported to Be Burned out and Those Who Did Not Report to Be Burned out on Selected Variables

Variable	NO-Group			YES-Group		
	N	M	SD	N	M	SD
Age	135	38.5	10.7	61	35.9	9.7
Total years' teaching experience	138	12.5	8.4	62	10.2	7.5
Stress Prone Personality Inventory	138	3.17	0.42	62	2.91	0.40
Life Experience Stress Level	138	13.4	16.4	62	9.98	14.89
Internal Coping Skills	138	2.52	0.25	62	2.40	0.27
External Supports	138	2.37	0.32	62	2.15	0.35
Perception of Stressors	138	1.61	0.31	62	1.88	0.29
Psychological Symptoms	138	1.54	0.35	62	1.88	0.48
Physiological Symptoms	138	0.83	0.37	62	1.10	0.37
Reaction to Stress	138	2.02	0.25	62	1.90	0.27

Table 33

T-Test Summary Table of Burned-out Teachers and Non-Burned-Out Teachers on Selected Variables

Source	df	t value	p
Age	194	1.61	N.S.
Total years' teaching experience	198	1.81	N.S.
Stress Prone Personality Inventory	198	4.12	0.0001
Life Experience Stress Level	198	1.40	N.S.
Internal Coping Skills	198	3.15	0.0019
External Supports	198	4.42	0.0000
Perception of Stressors	198	-5.78	0.0000
Psychological Symptoms	198	-5.55	0.0000
Physiological Symptoms	198	-4.76	0.0000
Reactions to Stress	198	2.86	0.0047

Question 15

Did certain demographic variables (A) or performance scores on individual scales (B) (listed below) contribute significantly to a prediction of those teachers who reported to be either burned out or "getting there"?

(A) Demographic variables

1. age
2. sex
3. total number of days absent
4. total number of years of teaching experience

(B) Individual scale scores

1. Stress Prone Personality Inventory
2. Life Experience Stress Level
3. Internal Coping Skills
4. External Supports
5. Perception of Stressors
6. Psychological Symptoms
7. Physiological Symptoms
8. Reactions to Stress

A stepwise multiple-regression was utilized to test Question 15. The following criteria were specified: a .01 level of significance for inclusion of each new variable, a 4.00 minimum acceptable F-value to enter a variable, and a 3.90 maximum F-value to remove a variable.

In step one, the single variable, Perception of Stressors, was selected as the one which most highly correlated (R=.3806) with the criterion of burnout. The standard error of estimate using this single predictor was 0.429. Multiple R^2, the coefficient of determination,

(0.145) indicated which portion of the total variability of burnout was attributable to variability on the predictor, Perception of Stressors.

In step two, Psychological Symptoms was selected as the second variable to be included in the regression formula. With the inclusion of this variable, multiple R increased to 0.445, while the standard error of estimate decreased to 0.4165. When the Psychological Symptoms variable was added to the equation Multiple R^2, the coefficient of determination, increased to 0.198.

The process was terminated at the end of step two, since the addition of another variable was judged not to add significantly to the prediction of burnout.

Examination of the stepwise regression analysis indicated that approximately 20 percent of the variability in teacher burnout was predictable from teacher performance on the two variables, Perception of Stressors and Psychological Symptoms.

Question 16

What did those teachers who did not plan to teach until retirement report that they hope to be doing (a) next year, and (b) in three years?

In response to the question, "Do you plan to teach until retirement?" 35.5 percent (N=71) of the teachers questioned responded "yes", 49 percent (N=91) answered "no", and 15.5 percent (N=31) indicated that they were uncertain. A followup question, "Do you plan to stay in the field of education?", was submitted to those teachers (N=129) who either did not plan to teach until retirement or were undecided. Of these, 62 percent (N=80) said "yes", while the remaining 38 percent (N=49) indicated "no" or uncertainty. The answer to research question 16 is summarized in Table 34.

Table 34

Frequency Table of the One-Year and Three-Year Plans of Teachers Who Did Not Plan to Teach until Retirement

WHAT DO YOU PLAN TO BE DOING	NEXT YEAR?		IN THREE YEARS?	
	N	Percentage	N	Percentage
The same; teaching in the same situation	85	66%	39	30%
Change to another type or level of classroom	9	7%	4	3%
Don't know	7	5%	24	18.6%
Go into educational administration	-	-	5	4%
Raise a family	2	1.5%	8	6%
Begin a job outside the field of education	2	1.5%	6	4.7%
Quit	2	1.5%	1	.8%
Teach somewhere	1	.8%	4	3%
Be in some phase of education	1	.8%	3	2%
Be a school psychologist	1	.8%	3	2%
Return to school to study in a field outside education	-	-	7	5%
Travel	-	-	1	.8%
No response	17	13%	17	13%
TOTAL	129		129	

As indicated in Table 34 most (66 percent) of the teachers who did not plan to teach until retirement anticipated that they would be in the same teaching situation for at least one more year. However, the number of teachers from the same group reporting to be in the same teaching situation three years later dropped to less than one third (N=39, 30 percent). Considerable uncertainty about the future was reflected in the frequency of "don't know" responses (N=7, 5 percent) in one year; (N=24, 18.6 percent) in three years and by the number of teachers who failed to respond to these questions (N=17, 13 percent for both questions). Also noted was many teachers' desire within the next three years to get out of the classroom --go into administration (N=24, 2 percent), or become a school psychologist (N=1, .8 percent). Looking three years into the future, 18.6 percent (N=24) of the 129 respondents reported having definite career plans outside educational.

Question 17

What were the most frequently given reasons by teachers for continuing to teach in spite of reported feelings of being burned out or "getting there"?

Six (3 percent) of the 200 teachers interviewed reported that they were burned out. An additional 56 (28 percent) said that they were "getting there." To determine why these 62 teachers were continuing to teach, the following question was asked: "If so, if you are burned out, what is the main reason you are still teaching?" The respondents' reasons fell into eight categories which were summarized in Table 35.

The largest number, 34 percent, of the burned-out group reported that they continued to teach for financial reasons. Some teachers reported that they knew of no career alternative with a matching salary.

Table 35

Reported Reasons for Burned-out Teachers Continuing to Teach

Reason	N	Percentage
Financial reasons	21	34%
Enjoy the kids; enjoy teaching	15	24%
Hope things will get better next year	11	18%
Quitting next year	5	8%
Too close to retirement; in a rut	5	8%
Was trained to do this	3	5%
Haven't burned out completely yet	1	1.5%
Feel I'm still doing some good	1	1.5%
TOTAL	62	

Others mentioned poor economic conditions and reliance on a second income as reasons for teaching while burned out. Fifteen (24 percent) of the 62 teachers reported that they enjoyed the kids and/or enjoyed teaching as their main reason for remaining in the classroom, and 11 (18 percent) indicated that they were hoping things would get better next year.

Question 18

What proportion of female teachers reported that cooking, housekeeping, and childcare duties in addition to full-time teaching were a source of stress?

It was hypothesized that women teachers, in particular, who tend to have considerable housekeeping and childcare responsibilities beyond the demands of a full-time teaching job, may experience additional stress from trying to fill three full-time roles simultaneously. To collect data in support of this theory, the 167 female teachers interviewed were asked four questions which are summarized in Table 36.

First, the women were asked how many children they had living at home. Inspection of Table 36 revealed that most (59 percent) of the female respondents had no children currently living at home. Sixty-eight female teachers reported having from one to four children in the home. The most frequent response was two (18 percent). To those 68 women teachers who did have children living at home, the following question was posed: "For approximately what percentage of your child(ren's) care and supervision are you responsible?" As can be seen from Table 36, over half (N=45, 66 percent) of the women respondents reported being responsible for more than 50 percent of their children's care and supervision.

Next, the 167 women were asked "For approximately what percentage of your family's cooking and housekeeping duties are you responsible?" Without reference to marital status, 76 percent (N=127) of the women reported to be responsible for more than 50 percent (see Table 36). In fact, almost half of the group (48 percent, N=80) reported to be responsible for 100 percent of the housekeeping and cooking duties in their homes.

Finally, female respondents were asked, "Are childcare and/or housekeeping responsibilities while teaching full time a source of stress to you?" Teachers' responses are summarized in Table 36. While 37 percent (N=62) indicated that this was not or was rarely was a source of stress, 50.5 percent (N=100) affirmed the hypothesis stated above. Of those who responded "yes" 19 considered these responsibilities to be a source of stress "often" or "frequently."

A female elementary teacher from Nebraska attributed her tendency toward burnout to this very issue: "Sometimes I feel burned out and then I realize that it's full-time childcare responsibilities. I give my second graders so much love and understanding all day, when I come home to my own two preschoolers, I don't have any left. Then I have tremendous guilt."

Summary

The major purpose of this chapter was to analyze and present the data collected for the present study. Findings were presented through tables accompanied by substantiating discussion. The chapter was divided into 21 major sections. The first three described the preliminary survey of the state directors of special education, demographic descriptors of the subjects, and the reliability coefficients of the eight scales developed for this study. The remaining eighteen sections followed the order of the research questions presented in Chapter I.

Table 36

Summary Table of Reported Stress Level Associated with Housekeeping and Childcare Responsibilities

Category	N	Percentage
Number of Children		
0	99	59%
1	25	15%
2	30	18%
3	12	7%
4	1	.5%
	167	
Percent of Childcare Responsibility		
100%	17	25%
More than 50%	28	41%
50%	13	19%
Less than 50%	5	7%
Less than 5%	5	7%
	68	
Percent of Housekeeping and Cooking Responsibility		
100%	80	48%
More than 50%	47	28%
50%	24	14%
Less than 50%	9	5%
Less than 5%	3	2%
No Response	4	5%
	167	
Source of Stress		
Not at all	46	27.5%
Rarely	16	9.5%
Sometimes	71	42.5%
Often	14	8%
Frequently	15	9%
No Response	5	3%
	167	

CHAPTER V

SUMMARY

The present study was undertaken in an effort to identify and analyze the variables associated with the stress and burnout of regular and special education teachers. The subjects included 84 regular education teachers and 116 special education teachers from the midwestern states of Iowa, Kansas, Missouri, and Nebraska. Teachers from both groups were included to test the assertion that special educators experience a different and more severe stress level than do regular education teachers.

An investigation of the variables which surround and contribute to stress and burnout in regular and special education was deemed significant for several reasons. First, a review of current literature as summarized in Chapter II consistently emphasized the stressful nature of teaching compounded by the American public's unfavorable attitude toward the teaching profession. Furthermore, a relationship between the incidence of stress-provoking factors and teachers' psychological and physiological symptoms of stress including absenteeism has been substantiated. This rather dismal picture of the teaching profession becomes even more grim when considering the current exodus of teachers from the classroom, a reduction in the number of new teacher training graduates, and slightly increasing student enrollment.

As part of the study, a Stress and Burnout Questionnaire consisting of eight individual scales was developed to elicit information about stress-related behaviors. The responses of 200 teachers to telephone interviews based on the questionnaire were coded and statistically

analyzed as described in Chapter III. Results of 18 research questions (see Chapters I and IV) led to the following general conclusions regarding teacher stress and burnout.

Conclusions

Differences between Regular and Special Educators

The results of the present investigation revealed that there is no major difference between regular education teachers and special education teachers in terms of teacher stress. Thus, no statistically significant differences were discovered when the two groups were compared on: (a) stress-prone personality, (b) recent personal stressors, (c) internal coping skills, (d) supports within the environment, (e) perception of work-related stressors, (f) level of psychological symptoms of stress, (g) level of physiological symptoms of stress, (h) type of reactions to stress utilized, (i) rate of absenteeism, (j) intention to leave the teaching profession, (k) willingness to re-enter the teaching field, and (l) rate of burnout. Furthermore, both groups of teachers reported experiencing the same stressors, and assigned nearly the same stress level to the identified stressors. Thus, when the most frequently reported stressors were averaged and ranked for both groups of teachers, the resulting listings were practically identical. Consequently, the present research data refute the claim that special education teachers experience a higher level and a different type of stress than do regular educators.

Because no significant difference was found between regular and special education teachers in terms of stress and burnout, subsequent conclusions are based upon the entire sample, regarded as one group of 200 midwestern teachers with common characteristics and concerns.

Most Frequently Reported Stressors

Collectively, the most frequently reported stressors were: (a) "Lack of support from administrators", (b) "Working with other teachers", and (c) "Discipline; behavior problems." These data suggest that successful interpersonal communication within the school environment constitutes a critical factor for teacher satisfaction. Respondents perceived their relationships with the three groups with whom they most closely work--administrators, co-teachers, and pupils--as the most stressful components of teaching. Therefore, the ability to relate to and communicate effectively within the school setting constitutes a major component affecting teacher stress.

Differences between YES and NO Group

As hypothesized, respondents who reported to be either burned out (3 percent) or "getting there" (28 percent--YES group) were statistically significantly different in several ways from those who were not (NO group). Although no significant difference was discovered in age, total years of teaching experience, and level of personal stressful life events occurring over the past 12 months, a statistically significant difference was found in the following seven areas:

1. The NO group reported a higher mean score on the Stress Prone Personality Inventory than did the YES group, thus indicating a lower vulnerability to stress-related problems.
2. The NO group reported a higher mean score on the Internal Coping Skills scale than did the YES group. This finding represents the burned-out group's belief that outcomes in life are shaped by fate (external control) rather than personal action (internal control).

3. The NO group reported a higher mean score on the External Supports scale than did the YES group, thereby indicating a stronger adaptive capacity due to external supports. This includes such environmental variables as family members, colleagues, and administrators.
4. Their higher mean score on the Perception of Stressors scale reflects the YES group's tendency to conceive of teaching as extremely stressful.
5. Similarly, the YES group reported a higher mean score on the Psychological Symptoms scale than did the NO group. That is, the former group experienced a significantly higher level of commonly reported psychological symptoms of stress as a result of their jobs.
6. Again, compared to the NO group, the YES group's higher mean score on the Physiological Symptoms scale suggests that they experienced a significantly higher level of physiological symptoms of stress as a result of their jobs.
7. The NO group reported a higher mean score on the Reactions to Stress scale than did the YES group. In other words, participants who did not report to be burned out tended to use more positive coping strategies in stressful situations than did the YES group.

In summary, according to the results of this investigation, the respondents considered to be at or approaching burnout were found to be more vulnerable to stress-related problems, more externally controlled, less likely to have available and make use of support groups, more apt to find teaching extremely stressful, more afflicted with both psycho-

logical and physiological symptoms of stress, and more prone to react negatively when under stress.

Predictive Value of Questionnaire

An examination of the predictive value of the questionnaire used in this investigation showed that two scales--Perception of Stressors and Psychological Symptoms--considered together, most highly correlated with burnout. That is, those teachers who perceived work-related factors to be highly stressful and reported experiencing a high level of psychological symptoms of stress, as measured by the Perception of Stressors and Psychological Symptoms scales, may be possible candidates for teacher burnout and its concomitant negative affects.

Variables Associated with Teacher Stress

While 40 percent of the teachers in one survey ("Help Teacher Can't Teach", 1980) reported that they planned to quit before retirement, 49 percent of the teachers sampled in this investigation indicated that they did not plan to teach until retirement; an additional 15.5 percent admitted that they were uncertain regarding this question. Of those who did not plan to teach until retirement, over one third (38 percent) planned to leave the field of education entirely.

Recently, NEA (Toch, 1982) reported that more than one in three teachers surveyed would not become teachers again if given the chance. In comparison, 40 percent of 193 teachers who responded to the same question during the present investigation reported that they would not re-enter the teaching field. Even though more than half of the respondents (60 percent) would choose a teaching career again if given the chance, the majority (65 percent) conceded that they would not encourage their son or daughter to begin a career in education. This finding may

be interpreted as an indication that teachers would recommend careers with more positive benefits (i.e., recognition, status, salary) for their offspring.

Finally, most of the teachers interviewed (68.5 percent) admitted that they call in sick occasionally due to stress, thereby confirming the assumption that all teacher absences are not due to health reasons. The fact that most teachers reported to have used sick leave as stress leave further substantiated the conclusion that teachers are (a) under considerable stress, (b) disillusioned with their career choice, and (c) actively seeking a career change.

Special Problems of Female Teachers

Because the field of education is predominantly made up of women, the study highlighted the particular dilemma faced by many females who are attempting to fulfill two or even three full-time roles simultaneously. Thus, results indicated that most female respondents were responsible for over half of their family's childcare (66 percent) and cooking/housekeeping (76 percent) responsibilities. Furthermore, half (50.5 percent) of the women responded that these full-time responsibilities in addition to full-time teaching were a great source of stress. A particular subgroup of teachers--women--therefore, are having to cope with an additional outside stressor which appears to greatly inhibit their level of job satisfaction.

Limitations of the Study

The conclusions drawn from the results of this study are subject to the following limitations:

1. Since the study reflected the views of midwestern teachers, the validity of its generalizations is dependent upon the extent

to which these 200 teachers are representative of teachers throughout the United States.

2. Because the randomly drawn sample of teachers were requested by mail to participate in the investigation (see Appendix E), only speculations may be advanced to explain why some teachers failed to return their consent postcards. Possible explanations include (a) lack of interest in or importance assigned to the topic of stress and burnout in education, (b) feelings of extreme stress or burnout accompanied by hopelessness regarding improvement and/or fear of being discovered, and (c) misplaced or destroyed flyers requesting participation.
3. The telephone interviews occurred during the months of March, April, and May. Therefore, the effects of the "end-of-the-school-year" attitude upon teacher responses must be taken into account (i.e., less stress due to the approaching summer vacation, more stress due to limited time available to accomplish everything).
4. The generalizations derived from this study are based on the assumption that teacher stress can be accurately measured on the basis of self-reported data.
5. Finally, the variables of stress and burnout included in this research are intertwined and denote different meanings to various individuals. Therefore, their ambiguous nature must be considered when interpreting the results.

Educational Implications of the Study

Due to the parallel findings regarding the stress of regular and special educators, stress in education must be considered a concern

which is generic to the field. Not only would it be inefficient to address the issue simultaneously in both fields, but the commonality of this concern as it affects all areas and levels of teachers may serve to unify and strengthen our efforts to deal with it.

For these reasons, it is recommended that the scope of preservice and inservice teacher training be broadened to include (a) knowledge about the concept of stress, (b) understanding of the psychological and physiological symptoms of stress, and (c) stress management techniques aimed at enhancing teachers' internal and external coping skills. Information about the most frequently recurring stressors should be incorporated within this training. A major objective of such stress education is to reduce the stigma associated with stress and many teachers' unwillingness to seek help when they experience stress.

Teachers perceive the foremost source of stress in teaching as revolving around relationships with administrators. Hence they report that administrators, both at the building and district level, neither understand nor support them. Whether such an accusation is justified is not the issue in the present discussion. Rather, because teachers perceive them negatively, it is imperative that administrators become aware of how they are being perceived and begin to take positive steps to change this perception. Perhaps by improving their own ability to relate effectively as instructional leaders and supporters of teachers, administrators can initiate change and thereby reduce a potential stressor inherent in their own as well as in many teachers' jobs--low teacher opinion of administrators. Furthermore, administrators should provide regularly occurring opportunities for formal and informal teacher support groups. Rather than pointing the finger of blame at a particular group

within the educational community, these data should be used to restructure the school environment so that open and supportive communication between teachers and administrators becomes a reality.

Because the phenomenon of burnout is becoming increasingly more discernable, it is imperative that it be recognized within the field of education. The implications of this research suggest the existence of specific personality characteristics, unrelated to the teaching profession, which predispose an individual to burnout. Among these may be (a) the belief that outcomes in life are externally controlled and (b) the inability to maintain informal support groups.

The eight scales developed for this study might be utilized as pre- and post-measures of stress variables. For example, individual teachers could privately assess themselves, or data solicited from groups of teachers may be utilized to assess inservice needs. Furthermore, two scales--Perception of Stressors and Psychological Symptoms--could be utilized in an attempt to predict which individuals are likely to become debilitated by the stressful aspects of teaching.

Because stress has been found to be a problem seriously affecting teacher well-being and student success, creative measures must be instigated to confront it and thereby stem the deterioration of the teaching profession. The increasing exodus of good teachers from the classroom on a daily (absenteeism) and a permanent (attrition) basis together with decreasing numbers of qualified teacher graduates spells disaster for America's youth. An organized effort, therefore, must be initiated to (a) retain and reward master teachers, and (b) attract and train potential master teachers. Furthermore, opportunities must become available for teachers to take a respite from stress. For example, such respite may

take the form of (a) leisure activities and diversions which involve no major demands such as reading for enjoyment, or (b) activities which pose new and different demands such as a new hobby.

Finally, special attention must be given to female teachers trying to fulfill combined full-time professions--teaching, childcare, and home management. Personal development and organizational training might be useful to this group of teachers.

Suggestions for Future Research

The present study should be viewed as a step toward understanding and management of teacher stress and burnout. Several directions for further research can be delineated.

First, the present research must be expanded to include a national sample of teachers. Second, the eight scales included in the Stress and Burnout Questionnaire used in the teacher interviews could be factor-analyzed and revised to maximize their reliability and usefulness. Third, it might prove useful to replicate the investigation by utilizing a different group of subjects, such as school administrators. Fourth, helpful information may be obtained through controlled, cause-effect experiments designed to investigate the classroom behaviors of teachers whose responses on the Stress and Burnout Questionnaire indicate a high stress level. Finally, validation and measurement of the effects of teacher stress and burnout on students' emotional and academic achievement would yield important data toward substantiation of the model of stress in education presented in Chapter III. Continued and expanded research in this high-priority area would serve to promote the intellectual and economic future of this nation. Such efforts should be aimed at (a) documenting the impact of stress and burnout upon both teachers and

their students, (b) identifying, preventing, and reducing teacher stress, and (c) creating strategies to improve the quality of our educational system.

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APPENDICES

APPENDIX A

Letter and Questionnaire to
State Directors of Special Education

October 16, 1980

L. Kathleen Meagher
Doctoral Student
Univ. of Kansas Medical Center
Special Education Department
Herbert C. Miller Building
39th and Rainbow
Kansas City, Kansas

Dear

Some authorities consider teacher burnout--physical, emotional, and attitudinal exhaustion--"the biggest problem in education today" (Spaniel, Boston Univ.). Truch (1980) in his book, Teacher Burnout and What To Do About It, has estimated that some symtoms of burnout affect more than 90% of all teachers! The educational, administrative, and financial implications surrounding this problem are phenomenal. Administrators, teacher trainers, and teachers themselves need empirically-based data in order to deal with this serious issue. It is impossible to put a price tag on this problem, but some of the ramifications of burnout can be quite destructive. Teacher burnout may be related to psychosomatic illnesses, physical problems, deterioration in work performance and productivity, less tolerance of others, increased absenteeism, and deteriorating interpersonal relations. Most important, burnout affects our children!

In preparation for my doctoral dissertation at the University of Kansas, I am conducting a preliminary survey to assess research needs across the country regarding special education teacher burnout. Won't you take a minute or two to respond to the attached questionnaire? Of course, I would be very interested in any additional comments or observations that you might be willing to share related to special education teacher burnout. Enclosed is a stamped, self-addressed envelope for your convenience.

Your contribution is considered a very important part of my study. Thank you for your assistance.

Sincerely yours,

L. Kathleen Meagher
Doctoral Student
2203 W. 119th St.
Leawood, Kansas 66209
913 648-0261

STATE DEPT. OF SPECIAL EDUCATION SURVEY

SPECIAL EDUCATION TEACHER BURNOUT

Please check apropriate boxes:

☐ The State Dept. of Education of _____ (Name of State) is engaged in some effort to study the problem of special education teacher burnout.

(Please comment)

☐ The State Dept. of Education has not previously conducted a study regarding special education teacher burnout.

☐ The issue of special education teacher burnout is of concern to me, and I would be interested in a study related to this issue.

RESPONDENT:

_____
(Name)

_____
(Title)

_____
(Address)

_____
(Phone)

THANK YOU!

L. Kathleen Meagher
Doctoral Student
University of Kansas
2203 W. 119th St.
Leawood, Kansas 66209
913 648-0261

APPENDIX B

Letters of Support from Participating States

STATE OF IOWA • DEPARTMENT OF PUBLIC INSTRUCTION
GRIMES STATE OFFICE BUILDING • DES MOINES, IOWA 50319

Iowa
a place to grow

ROBERT D. BENTON, Ed.D., STATE SUPERINTENDENT
David H. Bechtel, M. S., Administrative Assistant
JAMES E. MITCHELL, Ph.D., DEPUTY SUPERINTENDENT

March 12, 1981

Kathy Meagher
2203 W. 119th Street
Leawood, Kansas 66209

Dear Kathy:

We, in the Division of Special Education, Department of Public Instruction, have reviewed the student research proposal on teacher burnout and believe it is a concept worth exploring in some depth. I have indicated to Ms. Meagher that we will assist her in identifying Iowa teachers who can respond to her survey needs.

We believe that teacher attrition is a problem, but more importantly, that some teachers remain in educational positions under stresses that reduce their effectiveness. It would be valuable to identify the variables of teacher attrition and teacher stresses within the classroom.

Sincerely,

PUPIL PERSONNEL SERVICES BRANCH
SPECIAL EDUCATION DIVISION

Kathy Skinner, Consultant
Special Education Administrative Services

KS/nb

Kansas State Department of Education
Kansas State Education Building
120 East 10th Street Topeka, Kansas 66612

February 25, 1981

L. Kathleen Meagher
2203 West 119th Street
Leawood, Kansas 66209

Dear Kathleen:

I am pleased to support your student research proposal which would investigate the reasons for burnout and attrition among special education teachers. Kansas has a significant number of budgeted, but unfilled special education positions. We know that in many of our school districts, the rate of attrition for special education teachers is high. We also know that there are a number of certificated special education teachers who have elected not to teacher or to teach regular classes. Your study should provide information that will help the State devise needed retention and recruitment strategies.

Should your proposal be funded, we would be willing to make teacher lists available to you and to assist you in any other way possible. Good luck with your endeavor.

Sincerely,

Betty Weithers

Betty M. Weithers, Coordinator
Special Education Administration

dmy

NEBRASKA DEPARTMENT OF EDUCATION

Mailing Address: Box 94987 301 Centennial Mall South Lincoln, Nebraska 68509
Telephone: (402) 471-2295

March 9, 1981

L. Kathleen Meagher
2203 W. 119th St.
Leawood, Kansas 66209

Dear Ms. Meagher,

The Nebraska Department of Education, Special Education Branch would like to express support for your proposal being submitted to the Office of Sepcial Education for a Student Research Grant. This proposal will assist in providing information needed by the Nebraska Comprehensive System of Personnel Development Committee. Specifically, the proposal will investigate the issue of special education teacher stress and burnout in Nebraska and three other Midwest States. Particular emphasis will be given to determining the rate and reasons for attrition including associated demographic factors.

The Nebraska Department of Education, Special Education Branch supports your proposal and urges that the proposal be funded.

Sincerely,

SPECIAL EDUCATION BRANCH

GARY M. SHERMAN
Director

MARY ANN LOSH, Supervisor
Inservice Programs

GMS:MAL/ckk

Anne Campbell
Commissioner
Box 94987
301 Centennial Mall South
Lincoln, Nebraska 68509

State Board of Education

Walter M. Thompson
President
Oakland, Nebraska 68045

Margaret Lockwood
Vice-President
1500 Gentry Boulevard
Gering, Nebraska 69341

Frank E. Landis
601 Lincoln Building
Lincoln, Nebraska 68508

James Monahan
623 Service Life Building
Omaha, Nebraska 68102

Helen Greene
Rural Route 2
Ashland, Nebraska 68003

Dorothy Creigh
1950 North Elm Avenue
Hastings, Nebraska 68901

Arlene E. Hart
Route 2
Sargent, Nebraska 68874

William C. Ramsey
6481 Cuming Street
Omaha, Nebraska 68132

an equal opportunity agency

ARTHUR L. MALLORY
Commissioner

Area Code 314
751-4909

State of Missouri
DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION
P.O. BOX 480
JEFFERSON CITY, MISSOURI 65102

203.

March 11, 1981

Ms. L. Kathleen Meagher
2203 West 119th
Leawood, Kansas 66209

Dear Kathy:

I have reviewed the outline of your proposed study of the stress and "burnout" of special education teachers in the Midwest. Your study would provide relevant information to the Department of Elementary and Secondary Education, Section of Special Education, as we seek to assure an adequate number of qualified personnel are available to serve handicapped children and youth in Missouri. The shortage of special education personnel is a serious problem and is being compounded by our inability or unwillingness to take appropriate steps to reverse the loss of personnel due to attrition. The Missouri Department of Elementary and Secondary Education, Section of Special Education, supports your efforts to look at this special education personnel problem. Our Department's personnel data management system does not have the resources to provide a complete listing of teachers for your sample selection. Therefore, I want to explain a few possibilities for obtaining a statistically acceptable sample.

1. Randomly select districts to voluntarily participate. Then select randomly from the lists of teachers that they provide.

2. Contact advocacy groups that may be able to furnish this information (i.e., Council of Exceptional Children, Gerold Stewart, President, Department of Mental Health, 2002 Missouri Boulevard, Jefferson City, Missouri 65101; or Association for Children with Learning Disabilities, Elaine Fry, President, 209 North East Street, Mount Vernon, Missouri 65712).

3. Contact Dr. Arni Dunathan, Professor, University of Missouri-Columbia, 225 Education, Columbia, Missouri 65211.

If there is any way we can be of further assistance to you in this study, please call on me. If you are funded, or if you pursue the study without the funding, we would be most interested in the results of your study.

Sincerely,

Delores John

Delores John
Supervisor of Federal Programs

mmv
cc: Dr. Leonard Hall
Dr. Roland Werner

APPENDIX C

Advisory Committee on Human Experimentation Approval

Investigator: Kathleen Meagher
Faculty Member: Floyd Hudson
Dept. : Spec. Education

#3141
ACHE Number

205.
Bureau of Educ. for the Handicapped
Funding Agency

7/29/81
Date

Dear Investigator:

The University Advisory Committee on Human Experimentation has reviewed your statement concerning the research proposal entitled:

Stress and Burnout Among Special Educators in the Midwest

The Committee has found that, as described, it complied with all the requirements established by the University and with the policies established by the Department of Health, Education and Welfare for protection of human subjects.

The human subjects will not be at risk. [X]

The human subjects will be at risk but the importance of the objective outweighs the inherent risk to the subject. [ ]

The following two procedures are required for continued supervision of this research project.

1. At six month intervals until the project is completed, one of the enclosed Project Status Forms must be returned to the ACHE Chairman. Three dated copies are attached for your future use.

2. Any significant change in the experimental procedure as described should be reviewed by this Committee prior to altering the project.

Thank you for your help and cooperation. If you have any questions, please feel free to contact me.

Sincerely,

John F. Bidwell

Chairperson, ACHE

cc: Principal Investigator
Research Administration — BHS, Room 224, Strong
Faculty Member Responsible for Project
Departmental Chairman

220

8/80

APPENDIX D

Stress and Burnout Questionnaire

STRESS AND BURNOUT QUESTIONNAIRE

Meagher

ID NO. _____

Date Card Returned _____

Note: Interviewers' script will appear in capital letters.

Name: _____ Address: _____

Phone: _____

Call Attempted: _____

Date of Interview: _____ Time: _____ Interviewer: _____

****

Part I

HELLO, IS THIS _____? MY NAME IS _____
I'M CALLING TO INTERVIEW YOU REGARDING STRESS AND BURNOUT IN TEACHING. OUR INTERVIEW SHOULD TAKE ABOUT 20 MINUTES. IS THIS A CONVENIENT TIME FOR YOU?

(If No, Go to Part II)

YOUR RESPONSES WILL BE TREATED WITH COMPLETE CONFIDENTIALITY. YOUR ANSWERS WILL BE AVERAGED WITH APPROXIMATELY 200 OTHER TEACHERS WHO ARE BEING CALLED. FEEL FREE NOT TO RESPOND TO ANY ITEM WHICH YOU CONSIDER TOO PERSONAL.

(Proceed with Part A)

Part II

WHEN WOULD BE A CONVENIENT TIME FOR ME TO CALL BACK? _____
_____
List Date and Times

THANK YOU, I SHALL CALL YOU BACK. GOOD-BYE.

****

Part A Status

1. ARE YOU CURRENTLY TEACHING? _____ Yes - 2. ___ REGULAR ED. OR
_____ No ___ SPECIAL ED. (Go to Part B I)

3. WHEN DID YOU LEAVE TEACHING? _____ (year)

4. WHAT WAS THE MAIN REASON YOU LEFT? _____
_____

5. WHAT IS YOUR PRESENT OCCUPATION? _____
_____

6. WHAT WAS YOUR MOST RECENT TEACHING ASSIGNMENT? REGULAR SPECIAL ED.

PLEASE RESPOND TO THE FOLLOWING QUESTIONS ACCORDING TO YOUR PAST EXPERIENCE AS A TEACHER. (Proceed to Part B II)

Part B I - Demographics

7. WHAT LEVEL? ELEMENTARY MIDDLE SCHOOL JR. HIGH OR SR. HIGH

8. IS YOUR SCHOOL DISTRICT CONSIDERED URBAN, RURAL, OR SUBURBAN?
(If Sped or Reg. Elem., go to #10)

9. WHAT IS YOUR MAIN TEACHING AREA? _____

10. HOW MANY YEARS HAVE YOU TAUGHT IN THIS POSITION? _____
(If Regular, go to #14)

11. ARE YOU CONSIDERED A SELF-CONTAINED, ITINERANT, OR RESOURCE TEACHER?

12. IN WHICH AREA OF SPECIAL EDUCATION DO YOU TEACH? _____

13. WHO IS CONSIDERED YOUR SUPERVISOR? YOUR PRINCIPAL, A DIRECTOR OF SPED, OR ANOTHER PERSON? _____

****

Part B II

14. HOW MANY YEARS HAVE YOU TAUGHT IN ANY AREA OF SPECIAL EDUCATION? _____

15. HOW MANY YEARS HAVE YOU TAUGHT IN REGULAR EDUCATION? _____

16. WHAT IS YOUR CURRENT AGE? _____

17. WHAT IS YOUR HIGHEST LEVEL OF EDUCATIONAL TRAINING?

BACHELOR'S MASTER'S SPECIALIST OR DOCTORATE

18. ARE YOU MARRIED (1), SEPARATED (2), DIVORCED (3), WIDOWED (4), OR SINGLE (5)?

19. MALE (1) OR FEMALE (2)? (If Male, go to Part D)

****

Part C - Female Teachers

20. HOW MANY CHILDREN DO YOU HAVE LIVING AT HOME? _____ (If 0, go to #22)

21. FOR APPROXIMATELY WHAT PERCENTAGE OF YOUR CHILD(REN'S) CARE AND SUPERVISION ARE YOU RESPONSIBLE?

100%	MORE THAN 50%	50%	LESS THAN 50%	5% OR LESS
(1)	(2)	(3)	(4)	(5)

22. FOR APPROXIMATELY WHAT PERCENTAGE OF YOUR FAMILY'S HOUSEKEEPING AND COOKING ARE YOU RESPONSIBLE?

100%	MORE THAN 50%	50%	LESS THAN 50%	5% OR LESS
(1)	(2)	(3)	(4)	(5)

23. ARE CHILDCARE AND/OR HOUSEKEEPING RESPONSIBILITIES WHILE TEACHING FULL-TIME A SOURCE OF STRESS TO YOU?

NOT AT ALL	RARELY	SOMETIMES	OFTEN	FREQUENTLY
(1)	(2)	(3)	(4)	(5)

24. ON A 100 POINT SCALE, WHAT PERCENTAGE OF THIS STRESS WOULD YOU ASSIGN TO EACH OF THESE THREE AREAS? TCHG.-RELATED DUTIES _____% HOUSEHOLD _____% CHILD CARE DUTIES _____%

****

Adaptive Capacity
Part D - Stress Prone Personality Inventory
(St. Louis University Medical Center)

"AS I READ THE FOLLOWING PHRASES, COMPARE YOURSELF WITH OTHER PEOPLE IN GENERAL, AND DECIDE HOW WELL EACH ITEM THAT I WILL SAY DESCRIBES YOUR OWN TYPICAL WAY OF DOING THINGS.

ALMOST NEVER, RARELY, SOMETIMES, OFTEN, OR ALMOST ALWAYS

	Almost Never	Rarely	Some-times	Often	Almo Alwa
1. Talk loud and fast.	5	4	3	2	1
2. Work hard and go at "full speed."	5	4	3	2	1
3. Get annoyed when having to wait.	5	4	3	2	1
4. Am good at remembering facts and figures.	5	4	3	2	1
5. Feel resentment about things.	5	4	3	2	1
6. Get angry enough to hit things.	5	4	3	2	1
7. Am irritated by inefficiency.	5	4	3	2	1
8. Take on more than I really should.	5	4	3	2	1

ID NO. _____
Page 4

Part D (Cont.)

9.	React to problems in an easy going manner.	1	2	3	4	5
10.	Have time for relaxation and reflection.	1	2	3	4	5
11.	Take a walk or spend time in leisure pursuits.	1	2	3	4	5
12.	Make decisions in a slow deliberate way.	1	2	3	4	5
13.	Listen well and don't interrupt others.	1	2	3	4	5
14.	Am satisfied with current position and status.	1	2	3	4	5
15.	Avoid being the one to run things.	1	2	3	4	5
16.	Work at an unhurried steady place.	1	2	3	4	5
	TOTAL POINTS					

****

Part E - Life Experience Stress Level

"HAVE ANY OF THE FOLLOWING EVENTS OCCURRED IN YOUR LIFE IN THE PAST 12 MONTHS?
(if Yes, Circle points)

1.	Gaining a new family member through birth or adoption.	40
2.	Change in financial status.	40
3.	Change in living conditions or residence.	25
4.	Major change on the job.	45
5.	Serious accident or illness.	50
6.	Divorce, separation, or break up in an impt. relationship.	70
7.	Marriage.	50
8.	Death of a spouse.	100
9.	Death of a close family member or loved one.	60
10.	Sexual difficulties.	40
	TOTAL ITEMS CIRCLED	
	TOTAL POINTS	

****

Part F - Internal Coping Skills

"HOW OFTEN IS THIS STATEMENT TRUE FOR YOU? OFTEN, SOMETIMES, OR RARELY

O	S	R		
3	2	1	1.	In a tense situation, I can control the tension and make myself relaxed again.
3	2	1	2.	I adjust well to change.
1	2	3	3.	If I'm going to become stressed, I become stressed no matter what I do.
1	2	3	4.	I can handle my stress, if I have professional help.
1	2	3	5.	Others have a lot to do with how stressed I become.
3	2	1	6.	My overall well-being depends on how well I take care of myself.
1	2	3	7.	When I can avoid becoming stressed, I'm just plain lucky.
3	2	1	8.	Whatever goes wrong with my life is my responsibility.
3	2	1	9.	Most of the time I am composed and in control of my life.
3	2	1	10.	I feel I can make changes in my life.
1	2	3	11.	Fate is a major determinant of happiness.
1	2	3	12.	I feel as if nothing ever changes.

TOTAL COPING SCORE

****

Part G - External Supports

"HOW OFTEN IS THE FOLLOWING STATEMENT TRUE FOR YOU? OFTEN, SOMETIMES, RARELY, OR NOT APPLICABLE

O	S	R	N/R		
3	2	1	0	1.	My principal supports me.
3	2	1	0	2.	I see staff members from my building socially.
3	2	1	0	3.	My husband, wife, or loved one is a good listener when I need to talk.
1	2	3	0	4.	Teachers' safety is physically threatened by students in my school.

(Part G continued)

O	S	R	N/A		
3	2	1	0	5.	Religion is an important part of my life.
3	2	1	0	6.	My family is supportive regarding my work.
3	2	1	0	7.	School-sponsored workshops on coping with stress are available to me.
3	2	1	0	8.	My supervisor gives me clear guidelines regarding my job responsibilities.
3	2	1	0	9.	My co-workers and I are included in problem-solving meetings.
3	2	1	0	10.	Staff support groups are available to me.
3	2	1	0	11.	Administrators in my district are concerned with the issue of stress in education.
3	2	1	0	12.	My home environment is free from excessive conflict.

TOTAL SCORE

****

Appraisal System
Part H - Perception of Stressors

THE FOLLOWING LIST OF ITEMS HAS BEEN SAID TO BE RELATED TO STRESS. ACCORDING TO YOUR PERSONAL EXPERIENCE AS A TEACHER, HOW DO YOU RATE THESE FACTORS?

EXTREMELY STRESSFUL MODERATELY STRESSFUL OR SLIGHTLY STRESSFUL

E	M	S		
3	2	1	1.	Discipline and classroom management.
3	2	1	2.	Job dissatisfaction.
3	2	1	3.	Time pressures.
3	2	1	4.	Administrative duties (paperwork, meetings, and so on).
3	2	1	5.	Parent-teacher relationships.
3	2	1	6.	Mainstreaming.
3	2	1	7.	Conflicting demands from administrators, parents, and so on.
3	2	1	8.	Special education, legal compliance, IEP's.

(Part H continued)

E M S

3 2 1 9. Maintaining working relationship with Supervisor, Principal, and others.

3 2 1 10. Teaching salary.

3 2 1 11. Availability of materials (books, supplies, and so on).

3 2 1 12. Threats of personal injury.

3 2 1 13. Crowded classrooms/High pupil-teacher ratio.

3 2 1 14. Professional growth activities (study, planning, inservice, conferences, and so on).

3 2 1 15. Lack of support and guidance from Supervisor.

3 2 1 16. Other classroom conditions (space, heating, air-conditioning, and so on).

TOTAL SCORE

****

Part I - Level of Perceived Control

HOW MUCH CONTROL DO YOU HAVE OVER EACH OF THESE FACTORS?

LITTLE CONTROL MODERATE CONTROL OR CONSIDERABLE CONTROL

L M C

3 2 1 1. Discipline and classroom management.

3 2 1 2. Job satisfaction.

3 2 1 3. Time pressures.

3 2 1 4. Administrative duties (paperwork, meetings, and so on).

3 2 1 5. Parent-teacher relationships.

3 2 1 6. Mainstreaming.

3 2 1 7. Conflicting demands from administrators, parents, and so on.

3 2 1 8. Special education, legal compliance, IEP's.

3 2 1 9. Maintaining working relationship with Supervisor, Principal, and others.

(Part I continued)

3 2 1 10. Teaching salary.

3 2 1 11. Availability of materials (books, supplies, and so on).

3 2 1 12. Threats of personal injury.

3 2 1 13. Crowded classrooms/High pupil-teacher ratio.

3 2 1 14. Professional growth activities (study, planning, inservice, conferences, and so on).

3 2 1 15. Lack of support and guidance from Supervisor.

3 2 1 16. Other classroom conditions (space, heating, air-conditioning, and so on).

TOTAL SCORE

****

Reported Stressors
Part J - Environmental Stressors

WHAT FACTORS OR CONDITIONS WITHIN YOUR WORK ENVIRONMENT CAUSE OR HAVE CAUSED YOU DISTRESS? PLEASE SPECIFY THE TOP TWO CONDITIONS THAT YOU'VE EXPERIENCED PLACING THE MOST STRESSFUL FIRST.

1. _____

_____

2. _____

_____

****

Part K - Personal Stressors

WHAT TWO FACTORS OR CONDITIONS WITHIN YOUR PERSONAL LIFE ARE PARTICULARLY DISTRESSING TO YOU? PLEASE SPECIFY THE TOP TWO CONDITIONS THAT YOU'VE EXPERIENCED PLACING THE MOST FIRST?

1. _____

_____

2. _____

_____

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Symptoms of Stress

Part L - Psychological Symptoms

I'M GOING TO BE READING A LIST OF ADJECTIVES TO YOU, AND I WANT YOU TO ESTIMATE HOW FREQUENTLY DURING THE SCHOOL YEAR YOU FEEL IN THESE WAYS ABOUT WORK IN GENERA.

RARELY 1 | ABOUT ONCE A WEEK 2 | ABOUT ONCE A DAY 3 | MANY TIMES A DAY 4

R	WK	DY	MY		
1	2	3	4	1.	Frustrated.
1	2	3	4	2.	Tense, nervous.
1	2	3	4	3.	Under stress.
1	2	3	4	4.	Bored.
1	2	3	4	5.	Fatigued psychologically.
1	2	3	4	6.	Depressed.
1	2	3	4	7.	Unable to cope.
1	2	3	4	8.	Very angry.
1	2	3	4	9.	Inadequate.
1	2	3	4	10.	Loss of concentration; preoccupied.
1	2	3	4	11.	Fearful; worried.
1	2	3	4	12.	Alienated.
1	2	3	4	13.	Out of control.

TOTAL SCORE

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Part M - Physiological Symptoms

I'M GOING TO BE READING A LIST OF CONDITIONS TO YOU AND I WANT YOU TO ESTIMATE HOW FREQUENTLY DURING THE SCHOOL YEAR YOU EXPERIENCE ANY OF THE FOLLOWING AS A DIRECT RESULT OF YOUR JOB.

NEVER 0 | RARELY 1 | ABOUT ONCE A WEEK 2 | ABOUT ONCE A DAY 3 | MANY TIMES A DAY 4

N	R	WK	DY	MY		
0	1	2	3	4	1.	Headaches.
0	1	2	3	4	2.	Digestive problems.

(Part M continued)

N	R	WK	DY	MY		
0	1	2	3	4	3.	Skin disorders.
0	1	2	3	4	4.	Tired.
0	1	2	3	4	5.	Ulcer flairups.
0	1	2	3	4	6.	Cold sweat.
0	1	2	3	4	7.	Heart beating fast.
0	1	2	3	4	8.	Loss of appetite or increase in appetite.
0	1	2	3	4	9.	Respiratory problems.
0	1	2	3	4	10.	Backaches, neck or shoulder tightness.
0	1	2	3	4	11.	Insomnia.
0	1	2	3	4	12.	Loss of voice.

TOTAL SCORE

****

Part N - Reactions to Stress

I'M GOING TO READ A LIST OF REACTIONS TO YOU. I WANT YOU TO ESTIMATE HOW FREQUENTLY YOU REACT IN THESE WAYS WHEN UNDER STRESS.

	OFTEN	SOMETIMES	RARELY	OR	NEVER

O	S	R	N		
3	2	1	0	1.	Exercise.
3	2	1	0	2.	Seek comfort in religious practices.
0	1	2	3	3.	Have alcoholic beverages to relax.
0	1	2	3	4.	Call in sick.
3	2	1	0	5.	Practice coping self-talk.
0	1	2	3	6.	Avoid the problem.
3	2	1	0	7.	Engage in a hobby.
3	2	1	0	8.	Confront the problem.

(Part N continued)

0	1	2	3	9.	Fall apart.
3	2	1	0	10.	Talk over the situation with someone I trust.
3	2	1	0	11.	Use relaxation techniques.
3	2	1	0	12.	Seek professional help.
0	1	2	3	13.	Displace the stress onto someone else.
3	2	1	0	14.	Use biofeedback techniques.
0	1	2	3	15.	Become aggressive.
0	1	2	3	16.	Take prescribed medication.
0	1	2	3	17.	Use other than prescribed drugs.
3	2	1	0	18.	Use personal resources to adjust to the situation.
3	2	1	0	19.	Think through the situation.
0	1	2	3	20.	Withdraw.
0	1	2	3	21.	Overindulge myself by overeating.

TOTAL SCORE

****

Part O - Absenteeism

1. HOW MANY DAYS WERE YOU ABSENT FROM SCHOOL LAST YEAR? _____

2. HOW MANY SICK DAYS DOES YOUR SCHOOL DISTRICT ALLOW PER YEAR? _____

3. DO YOU FEEL YOU CALL IN SICK OCCASIONALLY DUE TO STRESS? YES NO
(if No, go to #5)

4. ABOUT HOW MANY DAYS A YEAR? _____

5. DOES YOUR SCHOOL DISTRICT OFFER ANY INCENTIVE FOR PERFECT ATTENDANCE, SUCH AS REIMBURSEMENT FOR PART OF OR ALL OF UNUSED SICK LEAVE UPON RETIREMENT?
YES NO (If No, go to Part R)

6. IF SO, WHAT? _____

7. DO YOU DREAD HAVING TO GO TO WORK EACH DAY? YES NO

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Part P - Burnout Syndrome

1. ACCORDING TO THE FOLLOWING DEFINITION, DO YOU CONSIDER YOURSELF BURNED OUT? "EMOTIONAL EXHAUSTION RESULTING FROM THE STRESS OF INTERPERSONAL CONTACT" (INCLUDING LOW MORALE, HIGH ABSENTEEISM, AND LOSS OF POSITIVE FEELINGS, SYMPATHY, AND RESPECT FOR STUDENTS). (Maslach, 1978)

YES (1) NO (2) GETTING THERE (3) (If No, go to #3)

2. IF SO, WHAT IS THE MAIN REASON YOU ARE STILL TEACHING? _____

_____

5. WHAT DO YOU PLAN TO BE DOING NEXT YEAR? _____

_____

6. WHAT DO YOU HOPE TO BE DOING THREE YEARS FROM NOW? _____

_____

3. DO YOU PLAN TO TEACH UNTIL RETIREMENT? YES NO (If yes, go to #7)

4. DO YOU PLAN TO STAY IN THE FIELD OF EDUCATION? YES NO

7. WOULD YOU ENCOURAGE YOUR SON OR DAUGHTER TO BEGIN A CAREER IN EDUCATION? YES NO

8. KNOWING WHAT YOU KNOW HOW, IF YOU HAD A SECOND CHANCE, WOULD YOU RE-ENTER THE TEACHING FIELD? YES NO

9. DO YOU FEEL LIKE YOU CAN SWITCH CAREERS AT THIS POINT IN YOUR LIFE? YES NO

10. DO YOU FEEL BURNED OUT AS A RESULT OF THIS INTERVIEW? YES NO

****

Closing

"THANK YOU SO MUCH FOR SHARING YOUR PERSONAL EXPERIENCE WITH ME. GOOD-BYE."

(If questioned about results, respond . . . .)

"I'M SORRY, BUT UNTIL ALL OUR INTERVIEWS ARE COMPLETE AND THE DATA ANALYZED, WE HAVE NO AVERAGE SCORES WITH WHICH TO COMPARE YOUR RESPONSES."

(If asked for results at a later time . . .)

"IF YOU WILL GIVE ME YOUR MAILING ADDRESS, I WILL ATTEMPT TO SEND YOU RESULTS WHEN THEY ARE FINAL, PROBABLY EARLY NEXT FALL."

APPENDIX E

Flyer and Consent Postcard

ATTENTION FELLOW TEACHERS!!!

Much has been written on stress and burnout in education. As a classroom teacher I am concerned with this problem and feel that what is needed is personal interaction with people in the field like yourself.

Many studies on this topic have been designed using written questionnaires, but I want mine to be more personal. Therefore, to identify reasons teachers are leaving the field, I plan to conduct short telephone interviews. I've been awarded a student research grant from the Bureau of Education for the Handicapped to carry out my research.

Since your name was randomly selected from all the certified teachers in the Midwestern States of Iowa, Kansas, Missouri, and Nebraska, you will have an opportunity to share your experience and to give your opinion regarding this issue. I need to hear from you! Our talk will last about 15 minutes, and you should feel free not to respond to any questions which you consider too personal. PLEASE COMPLETE AND RETURN THE ENCLOSED POSTCARD TODAY!

Of course, your participation is strictly voluntary. Do not hesitate to ask any questions about the study. Be assured that your name will not be associated in any way with the research findings.

I'm hoping that you will take advantage of this important opportunity to improve our profession by offering what you know about stress in teaching!

I APPRECIATE YOUR HELP!

Kathy

Kathy Meagher
THE UNIVERSITY OF
KANSAS MEDICAL CENTER
Rainbow Boulevard at 39th Street
Kansas City, Kansas 66103
913 588-5943

BONUS!!!

FROM ALL THOSE RETURNED, TEN POSTCARDS WILL BE RANDOMLY DRAWN, AND THOSE LUCKY TEACHERS WILL RECEIVE BY MAIL A COMPLIMENTARY TEACHING AID.

NAME: _____

ADDRESS: _____

The best place to call me:

___ at home _____
area code & phone no.

___ at school _____
area code & phone no.

My breaks are: _____

_____

The best time to call me:

___ weekdays between 5 & 10 p.m.

___ weekdays at _____

___ Saturday morning

___ Saturday afternoon

___ Saturday evening

___ Sunday morning

___ Sunday afternoon

___ Sunday evening

___ No preference

Please indicate any special preference you have concerning dates or times.